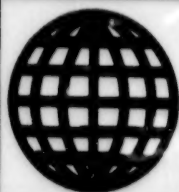


JPRS-TEN-94-012  
10 May 1994



**FOREIGN  
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# ***JPRS Report***

# **Environmental Issues**

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# Environmental Issues

JPRS-TEN-94-012

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10 May 1994

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## REGIONAL AFFAIRS

### Roundup of Environmental Reports

AB2004113594

[Editorial Report] The following is a roundup of recent environmental reports monitored from media in FBIS Abidjan Bureau and EAU coverage areas from 30 March to 18 April.

#### CONGO

Dakar PANA in English, in a Brazzaville-dated item at 1415 GMT on 11 April reports that "Congo now fears for the future of its surface waters and pressures brought on its forests." In a paper on the "forest climate and ecosystem" in Impfondo, Likouala Region, Jose Djoni Bourges, regional director of the Forestry Commission underlined the adverse effects of the forest destruction. He said "the large destruction of forests leads to the lowering of the output of streams," citing the case of the Sangha and Obangui Rivers, on the border between Zaire and the Central African Republic. "Bourges said there was a risk of the desert now threatening Chad encroaching on its forest. He added that countries separating Chad and Congo—Cameroon and the Central African Republic in particular—are among those which are mostly threatened with desertification." According to official figures, Congo loses between 15,000 and 20,000 hectares of forest a year. Agricultural practice not friendly to the environment is considered the first cause of deforestation in the country."

London BBC World Service in English at 1515 on 18 April reports that due to the effects of the violence in the country last November, authorities are now planning to conduct a major hygiene operation in Brazzaville. This operation will involve digging up and properly reburying the bodies of those killed in the recent ethnic violence. Opposition and presidential supporters thought to have been responsible for the bloodshed will be called upon to help locate the cemeteries or shallow pits which were used as common graves for hurriedly-buried bodies. At least 200 people are known to have been killed during the clashes in Brazzaville.

#### GHANA

Accra Ghana Broadcasting Corporation Radio Network in English at 1300 GMT on 18 April in its press review column says the GHANAIAN TIMES carries the assurance by the Environmental Protection Council that a strange substance in River Ankobra and its tributary is not harmful to human and animal life. The columnist quotes the Western regional program officer of the council as telling a meeting of fishermen in the communities along the river that a substance which emits a bad odor does not pose any danger to the health of the people. The chief of the area disputes the claim saying that the "presence of the substance in the river is scaring away fishermen from fishing because the substance damages their nets and affects their catch." The paper

supports a decision by the Ministry of Food and Agriculture to provide fishing communities with basic needs. They quote the deputy minister of the ministry in charge of fisheries of telling some fishing communities in the Dangbe West and Dangbe East districts that landing facilities at the beaches "would be provided to improve lighting systems and smoking sheds as well as tax-free concessions."

#### NIGER

Niamey Voix du Sahel Network in French at 1200 GMT on 31 March reports that the Goulbi River, the main water reserve which crosses the southern end of Maradi Region, is in danger. It is threatened by the construction of a dam in neighboring Nigeria. People and experts have been mobilized to find a suitable, lasting solution that would enable Niger to retain the waters that irrigate vast lands along the Goulbi River valley. Agricultural activities have slowed down in the Goulbi River valley because the river is drying out. Experts have studied the issue and decided to implement four water projects. The first one is a pilot project that is being tried out in a village located 6 km from Maradi. Once completed, the project will enable the flooding of about 17 hectares even during the dry season and will refill the Goulbi Basin.

Niamey Voix du Sahel Network in French at 1200 GMT on 4 April reports that the people of Goudoumaria, rendered powerless by a natural phenomenon, have found an easy alternative, but not necessarily the best. Sand dunes have encroached on their farms so they have begun a rural exodus. According to a Voix du Sahel correspondent in the region, "Goudoumaria covers an area of 9,500 square km for a population of 30,000 comprising Fulanis, Manga, Tubus, and Tuaregs who practice farming and animal husbandry." He goes on to say that the frequency and intensity of the wind which moves tons of sand from one place to another have forced people to leave their homes. A regional administrative official explains that because the people no longer have farming land they often go to Nigeria where they stay for months. He stresses that "theirs is a problem of survival because they have no money to buy food and some of their homes are totally buried in the sand." Commenting further on the situation of the people of Goudoumaria, the regional official suggests the creation of local jobs so that they could remain at home and support their families.

#### NIGERIA

Paris AFP in English at 0509 GMT on 30 March in a Lagos-dated item says: "Lake Chad has shrunk tenfold in the past three decades as a direct consequence of global warming, Nigeria's Minister for Water Resources Alhaji Isa Mohammed said here Tuesday. The lake has gradually shrunk from about 26,000 square kilometres (10,400 square miles) in 1962 to its present 2,500 square kilometres (1,000 square miles). Mohammed told an international workshop on the impact of global climate change on energy development.

The adverse phenomenon is the direct impact of global climatic change brought about by increased global warming caused by depletion of the ozone layer, Mohammed said. He welcomed the admission of the Central African Republic last week as the fifth member of the Lake Chad Basin Commission, meeting in Abuja, Nigeria, which could pave the way for a transfer of water from the Upper Oubangui river to the Chari river in Chad to increase the flow into the lake.

Lagos NTA Television Network in English at 2000 GMT on 11 April carries a report in which the Administrator of Anambra State, Colonel Mike Attah says erosion is being tackled within the limited resources of the state,

adding that representation has been made to the Federal Government on the issue. He made the observation while on a familiarization tour of Anaocha local government area of the state. In a report, NTA correspondent quotes the administrator as remarking that "with intensified revenue drive and prudent financial management, each local government council should be able to pay staff salaries promptly and embark on capital projects." He commended Anaocha local government for the various development projects. The reports says the chairman of the council drew the attention of the government to the "devastating effects of erosion in the area, the lack of motorable roads and health facilities within most communities."

### **Sino-U.S. Study Views Effect of Environment, Work on Health**

OW1604134094 Beijing XINHUA in English  
1314 GMT 16 Apr 94

[Text] Hefei, April 16 (XINHUA)—An initial survey of a large-scale Sino-U.S. joint investigation of the impact of environment and occupations on people's health was recently concluded in East China's Anhui Province.

It has produced a large body of data for experts to process and analyze.

The survey was sponsored by the International Research Center of Environmental Epidemiology, an institution jointly founded by Anhui Medical Sciences University and the U.S. Harvard University.

The four-month initial survey began last August 1 among almost 60,000 residents near Anqing City.

Each survey form contained more than 2,300 items of information. It focused on two subjects: natural history of respiratory system diseases and the relations between pesticide pollution and disease.

Regular follow-up surveys will be carried out among the same group of people in the next 15 years and will occupy generations of experts to research and find solutions to problems.

### **Liaoning Carries Out Campaign Against Air, Water Pollution**

OW2904022494 Beijing XINHUA in English  
0155 GMT 29 Apr 94

[Text] Shenyang, April 29 (XINHUA)—Northeast China's Liaoning Province has channeled billions of renminbi yuan toward fighting against air and water pollution.

As one of China's major heavy industry bases, Liaoning has many industries that cause serious pollution, including the metallurgy, chemical, paper-making and mining sectors.

To raise sewage disposal capacity, Liaoning plans to invest two billion yuan to launch the "clean water" project, which was initiated in 1992.

A pollution control program was framed to tackle industrial pollutants in the province's main rivers and all reservoirs. According to the program, some 157 enterprises in the province would put about one billion yuan into building 218 sewage treatment projects.

When they go into operation, these projects will be able to handle additional 300 million tons of waste water every year.

Early in 1988, the province carried out a "Blue Sky" project to curb air pollution in the region, which involved 14 cities, 35 counties and 3,800 enterprises, with a total investment of 770 million yuan.

All aspects of the project were completed and went into operation in June 1990. During the ensuing three-year period, nearly 20,000 boilers and furnaces were upgraded and 200 projects for industrial pollution control were completed.

Shenyang city, once labeled by the world environmental protection organization as one of the ten most seriously polluted cities in the world, began to issue licenses for airborne emissions in 1991.

So far, air pollution in the city has been brought under control. Ash and smoke content in the air has dropped remarkably.

### **Coastal Resources Reported in 'Danger'**

HK2504104594 Hong Kong ZHONGGUO TONGXUN  
SHE in English 0841 GMT 25 Apr 94

[Text] Beijing, April 25 (CNS)—According to the State Bureau of Oceanography, China has seen increasing damage of its resources in its coastal areas, posing a danger to the original coastal scenery and to the ocean ecology and leading to an adverse affect on tourism and economic development there.

It is reported that Xiamen, a coastal city in Fujian Province has seen excessive removal of sand along its coastline and unplanned construction of buildings and real estate development, with the result that a bathing beach near Xiamen University is suffering sand loss with the sand cover there becoming thinner from the original depth of more than 10 centimetres to less than one centimetre while 3.8 kilometres of beach there is now almost totally filled with rubbish and waste.

Such conditions are now also seen in Hainan with over 70,000 mu of beach area in Lushui County being severely damaged by rampant mining of titanium, leaving many hillocks and hollows there. On February 19, a beach near the Xinhai forestry centre was found to have been damaged by illegal removal and selling of sand, and such destruction, if it continues, will endanger the whole coastline there, posing a safety problem to the nearby coastal road.

A circular recently issued by the State Bureau of Oceanography pointed out that the ocean environment and resources was the base for people's lives. Recovery of the damaged environment and resources are very difficult to redress and will pose a direct and potential threat to the economic development and people's livelihood there.

### **Geographical Information Industry Expands**

OW2504120594 Beijing XINHUA in English  
1134 GMT 25 Apr 94

[Text] Beijing, April 25 (XINHUA)—A geographical information industry is taking shape in China as the country's survey and mapping research institutes and universities have in recent years achieved research breakthroughs.



These advances have come in the fields of surveying resources and monitoring the environment and natural disasters by using high- and remote-sensing technologies, including satellite sensing.

Official sources have said that China has established a dozen large-scale geographical information systems, including a national territory survey, flood forecast on the lower reaches of the Yellow River and anti-disaster measures.

Others include a monitoring information system for the "three norths" (north, northeast and northwest China) forest belts and environmental development, one for Shanghai's urban construction, one for the underground pipe network in urban Beijing and one for the basic land conditions in northeast China's Liaoning Province.

Speaking at today's inaugural meeting of the China Geographical Information Association, director of the State Bureau of Surveying and Mapping Jin Xiangwen said that China's construction of a geographical data bank has gone into high gear.

He said that a data bank on the primary geographical conditions of the national territory has been built up at the scale of one to one million, adding that a new one at one to 250,000 is in the pipeline.

Meanwhile, he said, China has started building a high-precision data bank of the earth compiled from satellite information.

A digital survey and mapping system is being constructed to gradually integrate aerial and remote-sensing surveys and the information system for the national territory integrated into a whole, according to the official.

Jin said that his bureau has set up digital production bases in Beijing, Shanghai, Guangzhou, Wuhan, Xian, Chengdu and Harbin.

Meanwhile, China has set up a key national lab for resources and environment information, a key national lab for surveys and mapping using remote-sensing data and a research institute for mapping and geographical information systems.

#### **New Regulations on Chemical Imports, Exports Issued**

*HK2104111294 Beijing ZHONGGUO XINWEN SHE in English 0854 GMT 21 Apr 94*

[Text] Beijing, April 21 (CNS)—In order to take joint action with the international community in controlling chemical pollution and minimizing losses resulting from such pollution, the National Environmental Protection Agency, the General Administration of Customs and the Ministry of Foreign Trade and Economic Cooperation recently jointly issued regulations on environmental administration over the importing for the first time of chemicals and the importing and exporting of toxic

chemicals. According to the regulations, from May 1 of this year, chemicals without registration for importation will not be allowed to be imported into China.

It is reported that over 38,000 varieties of chemicals are now produced in China and a great amount of chemicals are imported into the country and since there has been a lack of a complete set of regulations and necessary technological measures on their administration, some problems have been appearing in their production, use, transportation, storage and waste disposal.

According to the regulations, the National Environmental Protection Agency will be in charge of unified environmental supervision and administration over the import of chemicals and the import and export of toxic chemicals in line with the "London Standards" stated in an international pact. The agency will issue a list of toxic chemicals subject to prohibition or strict restriction by the country. Chemicals to be imported into the country and those chemicals included in the list of toxic chemicals will be subject to registration and approval procedures for a permit to be given for their importation and exportation.

The General Administration of Customs and the Ministry of Foreign Trade and Economic Cooperation will be respectively in charge of the inspection of such chemicals and the examination and the making public to the outside world of the list.

#### **Song Jian To Head Environmental Law Inspection Team**

*OW1904031794 Beijing Central Television Program One Network in Mandarin 1100 GMT 6 Apr 94*

[Announcer-read report; from the "National News Hookup" program]

[Text] A nationwide check on the enforcement of the environmental protection law for 1994 will formally begin in May. Wang Bingqian and Song Jian will head the general inspection group. Major inspection work for this year will be carried out in Hebei, Inner Mongolia, Jilin, Zhejiang, Fujian, Henan, Hunan, Guangxi, Sichuan, and Guizhou. Inspection teams will mainly carry out inspections in those provinces on the implementation of the environmental protection law, atmospheric pollution prevention law, water pollution law, wildlife animal protection law, ecology-related laws and regulations, and laws and regulations formulated by the State Council.

#### **Qinghai-Tibet Plateau Lakes Record Climatic Changes**

*OW1904042094 Beijing XINHUA in English 0408 GMT 19 Apr 94*

[Text] Lanzhou, April 19 (XINHUA)—The vicissitudes of lakes on the Qinghai-Tibet plateau have been reflecting climatic and environmental changes since ancient times.



This conclusion was drawn by a team of Chinese geologists who recently completed extensive scientific studies on this highest plateau in the world, situated in western China.

The geologists found that the bulging movement of the plateau has had a great influence on the change of water level of the lakes.

For example, Qinghai lake was a shallow saltwater lake only ten m deep in its early stages. At one time, the level was 20 m higher than the present level.

The dropping of the water level started only 3,000 years ago, and the change of lake water temperature began 2,500 years ago.

By way of satellite reconnaissance the scientists discovered that the alternations of time, geological region and climatic conditions all produce changes in the lake.

#### **Beijing, Canberra Cooperate To Rehabilitate Mining Waste**

OW2004135494 Beijing XINHUA in English  
0823 GMT 20 Apr 94

[Text] Beijing, April 20 (XINHUA)—The Sino-Australian Mine Waste Research and Management Project, a cooperative science and technology program between the two governments, started here today.

According to an official from the Chinese Ministry of Foreign Trade and Economic Cooperation, the aim of the project, the memorandum of understanding of which was signed in 1992, is to assist China in mitigating environmental degradation caused by the depositing of mine waste through introducing suitable technology from Australia.

Another purpose is to develop rehabilitation plants at mine sites, and make policy on mine waste management, the official said.

She added that the Australian Government has supplied 3.5 million U.S. dollars and technology for the project. Australian experts have inspected the project facilities, some of which have already been set up.

The Beijing General Research Institute of Mining and Metallurgy, the Zhongtiaoshan Nonferrous Metals Company of north China's Shanxi Province and the Tongling Nonferrous Metals Company in east China's Anhui Province are participating in the project.

Among those present at today's inauguration ceremony were Qin Zhongda, vice-chairman of the Environmental and Resources Protection Committee of the National People's Congress, He Boquan, deputy president of the China National Nonferrous Metals Industry Corporation (CNNC), and Sam Gerovich, minister of Australian Embassy.

He Boquan told the ceremony that over the past decade China's production of ten nonferrous metals has tripled, with a total output of 3.29 million tons last year. However, the volume of mine waste is also on the rise.

Each year, he said, CNNC affiliates generate a total of 60 million tons of mine tailings, accounting for 89 percent of the sector's industrial solid waste.

So far, he added, the accumulated mine tailings amount to one billion tons, taking up two million ha of land, and with only a small portion reutilized.

Gerovich expressed the hope in his speech that the project would become a catalyst for future two-way investment in the field, and further the cooperation between the two countries in various aspects.

According to him, the Australian investment in China totals one billion U.S. dollars, encompassing 1,200 projects. He added that Chinese investment in Australia currently stands at 350 million U.S. dollars.

## REGIONAL AFFAIRS

**ASEAN Plans Cooperation on Environmental Issues***BK2404115094 Bangkok THE SUNDAY POST in English 24 Apr 94 p 2*

[Text] Bandar Seri Begawan—ASEAN senior officials yesterday completed the draft of the Bandar Seri Begawan Resolution as a guideline for closer cooperation on the environment among member countries. The resolution will be proposed to environment ministers of Asean during the sixth ministerial meeting on the environment in Brunei's capital tomorrow.

Representing Thailand will be Deputy Minister of Science, Technology and Environment Pichia Musikun.

On the agenda are:

- The Asean plan of action on the environment;
- The launching of Asean Environment Year 1995;
- The quality standards for air and river water; and
- Regional cooperation for the management and control of transboundary movements of hazardous wastes into and within the region.

It was initially agreed that some significant framework and guidelines be established under the Asean strategic plan of action, the officials said.

"The member countries are working to develop a common stand on some international forums like the biodiversity and Basel conventions," a Thai delegate said.

The strategy encompasses such issues as the implementation of the so-called Agenda 21, the development of policy directions and the extension of operational and technical cooperation on the environment. At the same time, there will be a study on the implementation of the Asean Free Trade Area on the environment.

Senior officials endorsed the Asean Environment Year—Asean Green and Clean—at the meeting.

Asean Environment Year, which is the initiative of Thailand, aims to promote public awareness of environmental protection, according to a Thai delegate. He said the year would be officially inaugurated on January 1, with a wide range of regional and national activities in each member country. Promotion campaigns, however, will start this year.

He said most regional activities would be held in the form of seminars or workshops while national activities depended on arrangements of individual countries. There will probably be a study camp for young people or a trade fair and an exhibition on green products. It was agreed member countries must achieve set air and river water quality standards by 2010.

The standard for air in urban and industrialised areas must be lower than 200 on the Pollutant Standards Index (PSI), one official said.

The quality standards for river water, were set as follows: 6.0-8.5 for pH, two milligrammes per litre of dissolved oxygen or more, 10 milligrammes per litre of biochemical oxygen demand (BOD) or less, and 200 milligrammes per litre of total suspended solids (TSS) or less.

The officials also discussed a proposal of the Philippine delegates that Asean adopt its own version of the Basel Convention which regulates the management and control of transboundary movement of hazardous wastes.

However, many delegates voiced disagreement with the idea.

"Asean should adhere to the existing convention. Adopting a new one is time consuming," they said.

One official said he thought the Basel Convention was comprehensive enough in controlling the export of toxic wastes from developed to developing countries. "I don't think we need another version." He said the issue would be further discussed at a meeting of the working group on the transboundary movement of hazardous wastes which will be held in Bangkok next year.

Each country, he said, would work out its measures to deal with the issue before next year's meeting. "In fact, whether the toxic wastes will be a problem depends on each country's management and control system. The convention is just a broad outline," he said.

## JAPAN

**Biographical Sketch of Environment Agency Head***OW2804121094 Tokyo KYODO in English 0913 GMT 28 Apr 94*

[Text] Tokyo, April 28 KYODO—Toshiko Hamayotsu, appointed director general of the Environment Agency in the new cabinet, is one of the up and coming female members of Komeito [Clean Government Party].

She succeeded Wakako Hironaka of Komeito.

As a lawyer, Hamayotsu, 49, specialized in cases of inheritance disputes and international divorces.

The author of many books, Hamayotsu has long been involved in issues concerning women's rights.

One colleague described her as "refined and friendly."

She had long been serving as a law advisor for the party before she was elected with the largest vote for a House of Councillors constituency in Tokyo. She is currently serving her first term in the upper house.

**Government Study Urges Replenishment of Fishing Resources**

OW1904025694 Tokyo KYODO in English 0230 GMT 19 Apr 94

[Text] Tokyo, April 19 KYODO—Japan should take steps to recover increasingly scarce marine resources in the area of sea around Japan and to create better working environments for female workers in the fisheries industry, urged a government white paper released Tuesday [19 April].

The annual white paper on fisheries said Japan's total fisheries production, including catch and cultured fish, amounted to 9.27 million tons in 1992, down 7 percent from the previous year.

It is the first time fishery production has declined four straight years since 1945, the paper said.

Deep-sea fishery production increased by 0.8 percent to 1.27 million tons. It was the first year-on-year increase in five years for deep-sea fisheries, which have been generally declining due to tightening regulations on fisheries in international waters, the paper said.

Coastal fisheries also increased by 4 percent to 3.27 million tons.

Offshore fisheries, however, declined 17 percent to 4.53 million tons, dropping below 5 million tons for the first time in 15 years.

The paper said the decline in offshore fisheries reflects the growing scarcity of marine resources in Japanese waters. "It is an urgent task for Japan to recover marine resources in the Japanese waters by such means as releasing fish fry and maintaining underwater reefs for fish," it said.

Utilization of marine resources should also be more effective, it added.

The paper, submitted at a regular cabinet meeting by Agriculture, Forestry and Fisheries Minister Eijiro Hata, also noted for the first time the importance to the industry of the female workforce.

Women are taking an important role in the workforce of the fisheries industry and as leaders of local activities in fishing areas, it said.

It is important to encourage young women in the field to stay by creating a better working environment for them, the paper said.

**Forum Agrees on Guidelines for Antarctica Tourism**

OW2004095394 Tokyo KYODO in English 0852 GMT 20 Apr 94

[Text] Kyoto, April 20 KYODO—Delegates to an international Antarctica meeting under way in Kyoto basically agreed Wednesday [20 April] on a set of guidelines for visitors to the South Pole to protect its "unique and pristine" environment.

The regulations proposed by Britain and Australia urge tourists, explorers and travel agencies to control their own activities to protect the wildlife and environment of the continent.

They will be formally adopted during the conference's final sessions Thursday and Friday.

"Do not feed, touch, or handle birds or seals," "do not damage plants," and "do not use guns or explosives," are among the draft's guidelines urging visitors to refrain from activities that disturb the Antarctic flora and fauna.

Tourists and adventurers are also asked to respect protected areas, to stay away from research facilities and study sites, not to dispose waste or collect rocks and fossils as souvenirs, and to plan their trips sensibly.

The draft obligates tour organizers to notify national authorities about planned activities, assess and monitor the environmental impact of their expeditions and employ experienced and trained guides.

Travel agents must inform tour participants about the requirements of the 1959 Antarctic treaty and its follow-up provisions and educate them about proper behavior in Antarctica.

Delegates could not reach a consensus on how the guidelines should be implemented by national governments but decided to discuss national solutions at the coming Antarctica conference in South Korea next year.

Restrictions on tourism have become a hot potato among treaty signatories since the adoption of the protocol on environmental protection to the Antarctic treaty in 1991.

Countries like the United States and Britain, from where many tourists visit the area, were opposed to tough regulations involving liability for environmental damage as proposed by France and Chile.

A major success of the Kyoto conference is that delegates reached an agreement on the tourism issue at all. However, a Japanese delegate decried that the guidelines were watered down to minimum requirements.

"Their content is characterized by the thinking 'let's start from the common ground for the time being,'" the delegate said.



A U.S. delegate said the need for such guidelines on the other hand shows "how close the South Pole has moved to us."

About 250 delegates from some 40 countries, international organizations and nongovernmental groups are attending the meeting which started April 11 and runs through Friday.

About 7,000 tourists including some 100 Japanese visit the South Pole each year, but there have been reports of the tourists trampling penguin nesting grounds, damaging local plant life and disrupting scientific experiments being conducted in the area.

## NORTH KOREA

### Mass Rally Held Protesting South Nuclear Waste Dumping

SK2104152094 Pyongyang KCNA in English  
1514 GMT 21 Apr 94

["South Korean Puppets' Nuclear Waste Dumping Denounced"—KCNA headline]

[Text] Pyongyang, April 21 (KCNA)—Working people in Pyongyang held a mass rally today to bitterly denounce the South Korean puppets' criminal dumping of nuclear waste.

Hwang sang chun, chairman of the State Environmental Commission, and representatives of various strata took the floor.

The speakers branded the South Korean rulers' nuclear waste dumping in the sea as an anti-national, anti-human crime that can be committed only by those indifferent to the existence of the nation and international law and as a never-to-be-condoned crime in cutting the lifeline of the nation.

The South Korean puppets dumped as much as 11,000 trillion bequerel of nuclear waste in the sea in the 1986-1992 period.

In South Korea, even the Raktong River has been contaminated with radioactive material, causing a big public stir.

The speakers said due to the South Korean puppets' nuclear waste dumping, fishes in South Korean waters have disappeared, the haul of myongthae has diminished to ten percent, undaria pinnatifida and other sea resources have been exterminated and women often give birth to deformed babies.

They pointed out that the nuclear waste dumping is getting more grave and dangerous with the nuclear arms development promoted in secrecy in South Korea.

The South Korean puppets started to develop nuclear weapons under the "nuclear umbrella" of U.S. imperialism long ago and now they are promoting nuclear arms development, possessed of reprocessing facilities.

The traitor Kim Yong-sam unilaterally scrapped the joint declaration on the denuclearization of the Korean peninsula.

The speakers denounced the Kim Yong-sam group for massively shipping Patriot and other means of nuclear war to South Korea and desperately working to unleash a war while crying for an "international cooperation system" and "military countermove" over the faked-up "nuclear issue" of the North.

They demanded that the South Korean puppet clique unconditionally stop the nuclear arms development, discard the intention of igniting a new war in collusion with outside forces and step down without delay.

## SOUTH KOREA

### Greenpeace Calls for Tougher Safety in Nuclear Reactor

SK2004094494 Seoul YONHAP in English 0611 GMT  
20 Apr 94

[Text] Kwangju, April 20 (YONHAP)—Greenpeace, the international anti-nuclear and environmental protection group, demanded Wednesday that the government and Korea Electric Power Corp. (KEPCO) reveal all mishaps and precise information related to the nuclear power plants in Yongkwang, West of Kwangju.

In a press conference at the Kwangju City Council building, Greenpeace said the two nuclear reactors in Yongkwang were highly hazardous due to technical flaws in their steam generators and fire protection equipment, and urged the authorities to disclose data about the reactors and mishap details.

The nongovernmental body, on a 13-day Korean tour kicked off April 12 by its flagship MV Greenpeace, traveled from the Northern port city of Samchok and Pusan to arrive in Kwangju on Wednesday while staging various antinuclear campaigns and other activities to raise environmental consciousness along the way. The group will reach Seoul on Friday after stopping off at Incheon.

This particular steam generator, a core part of nuclear reactors made by Westinghouse of the United States, is causing accidents worldwide due to technical problems, Greenpeace campaigners said.

Yongkwang's steam generators, which were built in a similar period as those of other countries, could also have defects, they said. A campaigner pointed out that a control rod had been destroyed while a fuel rod was changed at the No. 2 Yongkwang reactor in March 1988 but nothing was revealed about the mishap. Greenpeace



urged the government and KEPCO to look into the possibility of nuclear accidents and conduct training for emergency evacuations to ensure public safety. It pledged to work with environmental coalitions in the area in staging antinuclear campaigns and continue with its environmental activities in Korea.

Later in the day, Greenpeace sponsored a seminar at Chonnam University and showed a video tape of its activities. Campaigners from various nations then visited the Mangwol cemetery, where victims of the Kwangju uprising are buried, and took part in a concert to get across their environmental message.

## PHILIPPINES

### Ramos Forms Committee for Expeditious Issuance of ECC

BK2604020994 Quezon City Radio Filipinas in English  
0230 GMT 25 Apr 94

[Text] President Fidel V. Ramos issued Memorandum Order [M.O.] No. 201, creating a committee to study the expeditious issuance of environmental compliance certificate [ECC] for infrastructure projects. The committee is composed of the National Economic and Development Authority director-general as chairman, and the secretaries of the Departments of Environment and Natural Resources, Public Works and Highways [DPWH], Energy, and Transportation and Communications and the chairman of the Coordinating Council of the Philippine Assistance Program as members.

In signing the order, President Ramos said the government is now engaged in the implementation of major infrastructure projects that are crucial to the attainment of the Philippine development goals. Mr. Ramos noted that lately, implementation of this infrastructure projects has been delayed due to the difficulties encountered in securing environmental compliance certificates. The president tasked the committee to undertake the following:

1. to determine the scope of environmental compliance certificates;
2. to formulate ways and means by which the issuance of environmental compliance certificate may be expedited; and
3. to submit recommendations to the executive secretary for the formulation of the appropriate order. These recommendations should be submitted to him not later than 15 May of this year.

Executive Secretary Teofisto Guingona Jr. said President Ramos issued M.O. 201 in view of the request of Public Works and Highways Secretary Gregorio Vigilar for presidential assistance for the immediate implementation of the Pampanga Delta Development Project [PDDP]. According to Vigilar, the submission of an

environmental compliance certificate is one of the priority requirements of the Overseas Economic Cooperation Fund [OECF] of Japan before it issues a conformer to the contracts of the PDDP. Vigilar said that during the president's visit to PDDP site last 25 March, the OECF representative in Manila, (Iteyo Tanakan) informed him that the OECF will continue to withhold the release of PDDP funds until the DPWH has complied with the conditions stated in the ECC. Vigilar said that the OECF is particularly concerned with Section 1.3 of the ECC which requires the DPWH for the contractors to secure endorsement from every concerned local government units and municipalities for right, suitable and acceptable relocation scheme and conduct consultations with affected residents prior to project implementation.

### EC Gives \$32.71 Million Aid for Environmental Program

BK1904080994 Manila MANILA BULLETIN in English  
6 Apr 94 p B-23

[Text] A total of \$32.71 million worth of assistance to the country's environment sector has been approved by the European Community (EC) for 1994.

In a report to President Ramos, National Economic and Development Authority (NEDA) Director General Cielito Habito said the assistance will go to the preservation of natural parks, integrated protected areas and industrial pollution abatement.

Habito said EC assistance will not only boost the government's environmental protection program but also enhance institutional linkages, investment promotion, agrarian reform implementation and coconut processing.

He reported to the president that a high-level business conference is expected to be held in Europe in September or October this year.

"This will explore possible business opportunities between the Philippines and EC countries," Habito said. "Hopefully, the conference will bear fruitful results in upgrading Philippine-EC trade relations."

The EC infused a total of \$75.37 million in the country last year which mostly financed rural development projects in Western Samar, Catanduanes, Aurora, Guimaras, Biliran, Bantayan, Camotes and Pitogo.

"The private sector also received grant financing for a packaging center and assistance to the computer software industry, which reflected greater private sector access to official development assistance," Habito said.

Habito informed the president that the EC has expressed interest in initiating regular high-level consultations to review pipeline projects as well as its ongoing projects. The first consultation might be held this May, he said.

### Marine Studies Loan From ASEAN-Canada Program Secured

BK2004054794 Manila *BUSINESS WORLD* in English  
8 Apr 94 p 7

[Excerpt] The Philippines clinched a grant from the ASEAN-Canada Cooperative Programme on Marine Science-Phase II for the implementation of research projects under the said program.

The \$137,774-grant was approved in principle by the program's Project Steering Committee in Chiang Mai, Thailand.

Some of the projects under the program include studies on environmental criteria, pollution monitoring, and red tide. Meanwhile, private firms and academic institutions, including research units, can now avail of support funds for research under the DOST's [Department of Science and Technology] Research and Development (R&D) Support Program of the Philippine Council for Advanced Science and Technology, Research and Development (PCASTRD).

The PCASTRD R&D Support Program covers research in the advanced science and technology fields of biotechnology, material science, information technology, photonics, electronics, instrumentation and control. [passage omitted]

### Use of Ozone Depleting Substances To Be Phased Out

BK2004112894 Manila *BUSINESS WORLD* in English  
12 Apr 94 p 12

[Excerpt] Protecting the ozone layer from further depletion is everyone's concern—from the use of aerosol sprays to the safe disposal of chlorofluorocarbons (CFCs) and halons in appliances.

Yesterday, the Department of Environment and Natural Resources (DENR) signed a memorandum of agreement (MOA) with multilateral financial institutions (MFIs) and the Land Bank of the Philippines for the launching of a phaseout program for Ozone Depleting Substances.

Under the MOA, MFIs like the Asian Development Bank and the World Bank are to provide funds to local appliance manufacturers for a shift from the use of ozone depleting substances to non-ozone depleting substances.

Manufacturers concerned are those producing refrigerators and air conditioners that use CFCs such as freon and fire extinguishers that use halon.

The MFI grant amounting to some \$7 million will be loaned to the private sector via the Land Bank.

In his speech at the signing of the MOA, President Ramos stressed his government "has always stood firm in giving top priority to the improvement of the environment," even as he urged Congress to consider as priority measures those concerning environmental protection. [passage omitted]

## TAIWAN

### Taipei To Meet CITES Requirements

OW2104102394 Taipei *CNA* in English 0815 GMT 21 Apr 94

[By Sofia Wu]

[Text] Taipei, April 21 (CNA)—Taiwan will meet the four requirements set by a United Nations wildlife protection organization by the end of September, a Council of Agriculture (COA) official said Thursday [21 April].

The UN's Convention on International Trade in Endangered Species (CITES) has asked Taiwan to make an inventory of all rhino horns, consolidate all rhino horn and tiger bone stockpiles, pass legislation to mete out harsher penalties for those involved in illicit wildlife product trade and effectively enforce all related wildlife conservation laws and regulations.

"We are determined to meet CITES requirements by the end of September," COA Vice Chairman Lin Shiang-nung said.

CITES will decide whether to sanction Taiwan for its alleged failure to eliminate illicit rhino horn and tiger bone trade in November.

"We hope our effort will spare Taiwan from CITES trade sanctions," Lin noted.

The COA will push the Legislative Yuan to pass a package of amendments to the country's wildlife conservation law, which propose stricter penalties for offenders, by the end of June.

"If the revised law can be passed soon, the United States may also lessen its trade sanctions against Taiwan," Lin said.

The Clinton administration decided to sanction Taiwan over wildlife conservation issues early this month. The decision will take effect within a month.

The COA has proposed a three-year plan for wildlife conservation, which will be implemented after being approved by the cabinet.

Under the plan, the government will spend NT [new Taiwan]\$1 billion (US\$37.74 million) over the next three years to enforce the consolidation of rhino horn and tiger bone stockpiles, intensify the crackdown on smuggling of endangered species, increase conservation education and international conservation cooperation, establish an identification system for wildlife and wildlife products and a wildlife data bank, and train conservation specialists.

## ALBANIA

### Ministry To Sell Pesticides Abroad Through Open Auctions

AU2904112994 Tirana ATA in English  
0812 GMT 29 Apr 94

[Text] Tirana, April 29 (ATA)—Albania will sell pesticides abroad through open auctions. The pesticides were brought into Albania as credits during favourable conditions within the last three years. The Albanian Government has commissioned the Ministry of Agriculture to sell the pesticides to the producing companies and later through open auctions.

"A special commission of the Ministry of Agriculture will follow all the international laws in pesticides sale," Hasan Halili, minister of agriculture told an ATA reporter. Mr. Halili said he considers pesticides selling to be the only acceptable solution for avoiding the grave ecological and environmental repercussions the pesticides might bring about when they expire.

Last October, the government permitted the sale of the pesticides inside Albania but according to the data of the Ministry of Agriculture and food the sold quantity has been insignificant.

Mr. Halili said the very companies which brought the pesticides to Albania has continually made requests for retaking them. "If the producing companies would not evade in a proper time the pesticides, we will put them to auction after we have received the approval of the organisms which financed their transport," he said.

The European Union, through the Picu office in Tirana, has been the first organism which offered its assistance for treating the pesticides brought in Albania in the context of the PHARE [Economic Reconstruction Aid for Poland and Hungary] program. The specialists say they are worried about the pesticides problem.

480 tons of pesticides were brought to Albania during the 1991-1993 period through the Italian credit, PHARE program and the World Bank credit.

## ROMANIA

### Environment Officials Confirm First Acid Rain in Bucharest

AU1904090094 Bucharest EVENIMENTUL ZILEI  
in Romanian 14 Apr 94 p 1

[Article by Carmen Popescu: "Acid Rain Burned Holes in People's Coats in Bucharest Yesterday"]

[Text] Bucharest residents yesterday were surprised to see a "white rain" falling, which promptly burned small holes in the tops of cars.

"It seems to be acid rain, and was caused by the fact that in intensely polluted industrial areas, raindrops that fall through the air are filled with noxious substances. There has never been acid rain in Bucharest; this happens only in very polluted towns," Cezar Niculescu from the Environment Protection Agency told us.

Ioan Stanescu of the National Meteorological and Hydrological Institute said: "The clouds that crossed Romania during this period created the necessary conditions for this quite rare phenomenon."



## BOLIVIA

### Threat to Country's Forest Resources Outlined

#### Losses to Burning

94WN0234A La Paz PRESENCIA in Spanish  
10 Jan 94 p 4

[Text] The president of the La Paz District Forest Chamber, Mauricio Hauser, reported that the clearing or burning of forests by campesinos is causing an annual loss of 80,000 hectares in the country's tropical and subtropical regions.

He noted that 90 percent of the destruction is due to the process resorted to by poor farmers attempting to expand their land for cultivation. In other words, there is an annual loss of 72,000 hectares that are permanently ruined.

According to Hauser, one of the main problems for the chamber that he heads is the progressive destruction of woods. It is difficult to curb this devastation, because consecutive governments have implemented policies aimed at establishing land with a capacity for agriculture and livestock raising (apart from the wooded areas), to provide for the consumption and export of food products.

Another cause leading to the constant destruction of forests is the economic and social crisis afflicting the populations in valleys. It has prompted waves of migration to the low-lying areas, with a resultant clearing of woods.

#### Lumbering Development

Fewer than 4,000 hectares of woods are actually allocated for timber forest development, according to the La Paz Forest Chamber.

In fact, the incidence in that area is less: that is, only 2,400 hectares under new management are converted into forests annually. It may be assumed that another five percent is destroyed by road construction. These are very low percentages compared with the increasingly extensive clearing.

The entrepreneurial organization's president claims that, for this reason, it has become essential "to take direct action to minimize the effects of poverty on the Bolivian population." He indicated that this could be achieved "through the country's productive-industrial reactivation, generating sources of permanent employment, and hence, better economic conditions."

Moreover, he called for the classification and demarcation of land suitable for forests, agriculture, livestock raising, and protection, through the passage of the Land Law.

According to the Forest Chamber, a more drastic change in the problem of forest and environmental destruction could occur through appropriation occupancy of woods

and forest land, "as well as legislation that would convert Bolivia into a forest country, with large production, based on sustained management of the woods."

However, Hauser did not cite another cause of the clearing of forests in southern Bolivia: the consumption of charcoal by the Vinto smelting plant. Large wooded areas of Chuquisaca, and in Zudanez, Tomina, and Hernando Siles Provinces, have been left converted into uncultivated land by the burning of woods to supply the Vinto company with charcoal.

That devastation, repeatedly scored by the authorities and inhabitants of the south, has been condoned by the Forest Development Center, without allowing for the so-called "ecological respite" proclaimed by the previous government administration.

#### Previous Figures Disputed

94WN0234B Santa Cruz EL MUNDO in Spanish  
21 Feb 94 p 8

[Excerpt] The country's forest resources are relatively well preserved, and there is time for them to be managed through appropriate policies. The reason is that the Amazon area shows a deforestation rate of 1.6 percent of the total recorded in Latin America, which is 50,000 square km per year, according to the FAO. This claim is made in a study from the Center for Research on the Capacity for Increased Land Use (CUMAT).

It maintains that the figures on the rate of deforestation previously used in the country are exaggerated, because an annual average of 200,000 hectares was cited, whereas the volume totaled only 80,087 hectares.

The determination of the area involved and the deforestation rate in Bolivia's Amazon area woods has been based on the assumption that the Bolivian Amazon area is the surface covered with wet forests, savannas, and bodies of water in the Amazon Basin. Also included is a small portion of the wet forests in the Plate Basin, approximately as far as the 18 degrees south latitude parallel.

The study revealed that the annual deforestation recorded is equivalent to that of an average period of five years. Santa Cruz Department is the one with the most deforestation, totaling 391.7 square km (48.9 percent); followed by Cochabamba, with 151.1 square km (18.8 percent); La Paz, with 109 square km per year (13.6 percent); Beni, with 98 square km (12.2 percent); and Pando, with 50.8 square km per year (6.3 percent). [passage omitted].

#### Focus on Beni Forests

94WN0234C La Paz PRESENCIA in Spanish  
1 Mar 94 p 6

[Text] Indian forest wardens do not suffice to protect the Chiman Forest from depredation. The Forest Development Center cites the need for reconciliation between equitable treatment and conservation of resources.



Bolivia's forests are declining by an average of 1,400 square km annually, equivalent to 140,000 hectares per year, as the director of the National Forest Development Center [CDF], Javier Lopez Soria, admits.

Lopez Soria is a professional conservationist, ex-director of the League for Protection of the Environment (LIDEMA), and currently a leading government authority. He is convinced that the new Forest Law will prevent indiscriminate exploitation of wood, the forests' principal resource.

"Good regulations included in the law must be aimed at preventing plundering activities, encouraging rational use, and promoting forestation." Lopez made this comment in the very heart of the Chiman Forest, where he had arrived as a member of a group of government officials who had come to hear the demands of the Beni Indians and to assess the deterioration of their habitat.

The Indians have shown the authorities evidence of indiscriminate felling of trees, primarily the mara or mahogany, a precious species, very highly priced on the domestic and foreign market for the manufacture of furniture, flooring, doors, etc.

#### **In Beni, 18 Percent of the Forests**

A total of 18 percent of Bolivia's forests (covering an area of 109.8 million hectares) are located in Beni. The Chiman Forest, with 1.2 million hectares, is facing an accelerated process of deterioration. Hence, if urgent measures are not adopted, this habitat, in which 2,266 Indians live, could be completely destroyed.

Not only is the mara tree becoming extinct, but the fauna as well; and the rivers are threatened by the intense activity of business firms still operating in an extensive area that was declared "Indian territory" in 1990. It was presumed that there would be no exploitation of resources by third parties in that area.

Lopez Soria claims that the situation in Chiman is complex, but remarked that its solution is part of a structural approach to the problem of the forests.

A study made by Lopez himself, titled "Forest Resources in Bolivia and Their Utilization," warns of the risk run by the forests if rational programs are not adopted. He comments: "The forests are subject to major risks. During the 15-year period, from 1971 to 1986 alone, the wooded areas were reduced by 21,000 square km, according to studies conducted by the FAO."

As he claims: "The annual volumes of utilization currently total about 350,000 cubic meters of trunk wood, but with the use of very few species."

The CDF director observes that only a few species are being exploited, but that there is an immense variety that could be used rationally.

#### **Selective Exploitation in the Chiman Forest**

He notes that what is happening in the Chiman Forest is selective exploitation of wood that is putting an end to the mara, one of the most precious varieties. He stresses: "It is not that the woods should not be exploited; what should be done is to maintain equitable treatment and conservation of forest resources."

According to the director, the CDF resources for curbing the illegal exploitation of wood have proven inadequate thus far, but there is a willingness to reinforce these agencies.

The government authorities have decided to return to the former administration in the CDF, which was decentralized in recent years. The undersecretary of sustainable development, Juan Carlos Quiroga, in turn, declares: "The CDF will be subordinate to the Ministry of Sustainable Development and Environment, and its administration will not be decentralized based on regions."

In the undersecretary's opinion, "The former decentralization of Forest Development Centers has served to allow for many irregularities."

#### **Taking Care of What Belongs to Them**

With those restructuring problems in the CDF, the Beni Indian peoples have assumed responsibility for taking care of their forests with their own resources. "There is among the Beni Indian peoples the view that an effective model of sustainable development can be achieved, using the Indian communities and settlements located in the territory as the main executors." This was stressed by the researcher and director of the Research and Documentation Center for the Development of Beni (CIDDE-BENI), Zulema Lehm. "There is also a conservationist tendency among large sectors of the Indian peoples, who are inclined to reinforce it."

Lehm comments: "Meanwhile, the Beni Indian peoples have created a Coordinating Board for the Multiethnic Indian Territory, with one representative for each people."

She explains that this coordinating board has, in turn, an Indian technical team, including 20 Indian youths who were elected at a meeting of mayors, and are to be trained to assist the coordinating board in the administration and management of the area.

The Indian technical team is subdivided into two groups: one for planning and another for protection. They were trained in planning, administration, management, and control of resources by institutions such as the Beni Biological Station, the Institute of Ecology of San Andres Major University, the Technical University of Beni, the CIDDEBENI itself, and other organizations.

### Getting to Work

The president of the Beni Indian Peoples' Center, Marcial Fabricano, claims that the young people who joined the technical team prepared a "Preliminary Plan for Protection and Development of the Multiethnic Indian Territory" in 1992. Its purpose was to "promote the socioeconomic and cultural development of the Indian peoples, and the conservation of natural resources."

Fabricano remarks: "The forest's natural resources can be used by retrieving traditional techniques."

According to Lehm: "The plan is an unprecedented experience in the country, because it was devised by the Indian peoples themselves, and because it adapted the methodology of the Management Plans for Protected Areas (which number few in the country) to the needs of the Indian Territory."

The CIDDEBENI director stressed that the Indians have organized six programs in their territory: for protection, productive development, research, social development, communication and dissemination, and operations. Each of them is, in turn, subdivided into subprograms.

### An Indian Forest Warden

As part of the protection program, the Indians have trained 15 forest wardens, who monitor the territory from strategically located stations. However, their warnings are not heeded by the power saw operators who are numerous in the woods, armed with their tools for felling trees.

Fabricano admits: "Sometimes there are conflicts, insults, and death threats, because the power saw operators pay no attention to the forest wardens, and we fear for their lives."

The Indian forest warden is recognized by the state, because the peoples themselves negotiated for legal support of their protective activity.

On 9 April 1992, Supreme Decree 23,107 officially created the Indian Forest Warden, granting him authority to monitor and protect Indian territories recognized as social and community property; to defend and conserve the flora and all the natural resources in the territory; and to direct and support activities aimed at the protection, conservation, and sustainable use of natural resources on the part of the Indian organizations.

And that is not all: The warden is authorized to "confiscate all products extracted in violation of the legal regulations for protection and conservation of territories; to penalize and impose fines on violators; and to have custody of the products and species that have been confiscated."

Nevertheless, the lumber companies find ways of extracting the resources from the forests; and, sometimes, when the Indian opposition is very strong, they find ways of winning over the communities, by offering them color television sets, radios, and money.

### Chiman Forest 'Endangered'

94WN0234D La Paz PRESENCIA in Spanish  
27 Feb 94 p 1

[Text] If urgent measures are not adopted, the Chiman Forest, located in Beni, in the country's northeastern section, will be destroyed by the plundering activity of the lumber companies and sawmills. They are still continuing their operations, and no one has succeeded in ousting them, not even the decrees on protection signed in 1990 after the march for "territory and dignity."

The Chiman Forest, considered the area most endowed with mara or mahogany wood ("Swietenia macrophylla," of the Meliaceae family), is facing a process of extinction. Despite this, its exploitation is intense, in contrast to the minimal reforestation.

Experts and ethnic groups warn that the mara will disappear here in the Chiman Forest within two or three years, as has been confirmed by the director of the Forest Development Center, Javier Lopez Soria, an expert on the problem.

A total of 80 percent of lumber exports, worth as much as \$48.8 million per year, consist of mara, produced mainly by Beni, followed by Santa Cruz.

Every year, the Beni sawmills receive 100,000 cubic meters of tree trunks.

It is calculated that at least 190,000 cubic meters of mara are exploited annually throughout the country. A large portion of it comes from the Chiman Forest, inhabited by 2,266 Indians who led a historic march on foot, from Puerto San Borja to La Paz, in 1990.

Added to the disappearance of mara is the pollution of rivers by the wood waste, which is creating upheaval in aquatic life, and, finally, the extermination of fauna, to supply an army of power saw operators who tour the Chiman Forest daily, felling young trees and squandering the wood.

Overflights by small planes through the Chiman Forest, and tours along the Apure River, with 13 Indian communities and 17 settlements located on its shores, have succeeded in proving to a government committee the danger threatening the Chiman Forest. The threat is present despite the legal regulations existing to protect it, and the efforts on the part of the Indian peoples and private organizations.

## BRAZIL

### Satellite Exceeds Expected Lifespan

PY2204022294 Rio de Janeiro JORNAL DO BRASIL  
in Portuguese 21 Apr 94 p 7

[Article by Ronaldo Brasilense]

[Text] The SCD-1 (Data-Gathering Satellite), the first Brazilian satellite made with national technology by experts from the National Institute of Space Research (INPE) in Sao Jose dos Campos, Sao Paulo, has caused a more-than-agreeable surprise. Launched in Cape Canaveral, United States, on 9 February 1993, the satellite should have had a one-year useful life. But inexplicably, it continues sending meteorological data to the INPE, which expects the SCD-1 to have another year of useful life.

"We are agreeably surprised," said INPE acting director Volker Kirchhoff when he reported the accomplishment of the SCD-1, which opens the way for the launching of the SCD-2 in 1995 and, in the future, the SCD-3, which is a communications satellite approved by the Brazilian Commission for Space Activities (Cobae). The SCD-1 has transmitted reliable environmental data on the Amazon region, allowing INPE experts to develop meteorological works on the region.

Ever since it was launched a year and two months ago, the SCD-1 has transmitted daily to the INPE station in Cuiaba, Mato Grosso, environmental data being monitored in Cachoeira Paulista, Sao Paulo. The first Brazilian satellite is in orbit 700 kms above the earth and gathers information on atmospheric pollution by carbon monoxide and the destruction of the ozone layer by CFC gases, besides monitoring the direction and intensity of climatic phenomena and the air's relative humidity.

The SCD-1's importance is that it is adding environmental data to that provided by the U.S. Landsat and Noaa-11 satellites, which are monitoring burning lands in the Amazon region, the Achilles heel of Brazilian environmental policy. "Our expectation is that the SCD-1 will last one more year," Volker Kirchhoff said, recalling that the success of the first completely national satellite opens the skies for the Brazilian Space Program.

## ECUADOR

### Ecological Group for Amazon Provinces Identified

94WN0233A Quito EL COMERCIO in Spanish  
12 Feb 94 p D-3

[Interview with Virgilia de Rodriguez, president of the Institute for the Ecological Development of the Amazon Region; place and date not given]

[Text] The Institute for the Ecological Development of the Amazon Region of Ecuador (ECORAE) has been engaged in important activity in the promotion and

development of the population in the Amazon region. The ECORAE is doing great work in the planning, coordinating, and supervising major projects designed to benefit the region.

In an exclusive interview, Virgilia de Rodriguez, president of the board of the institute, discussed various aspects of the work the ECORAE is doing with a view to benefiting the communities in the Province of Oriente.

**EL COMERCIO:** What goals is the ECORAE pursuing?

**Rodriguez:** The Institute for the Ecological Development of the Amazon Region is working to bring about the sustainable and sustained development of the region, with the participation of the social partners and action on the part of the public and private institutions. In addition, we are seeking, among other things, to improve the standard of living of the peasants and the Indians, while respecting their identity and their methods of production. We are trying to ensure a balance between conservation and development and to promote ecological tourism and research on and technological generation of the native species that contribute to agricultural and forest production.

**EL COMERCIO:** From what funds are your activities financed?

**Rodriguez:** The ECORAE is supported economically by funds obtained from the export of oil. Initially, the allocation was 0.01 cents on the dollar, but this sum has been increasing annually. We now have a much more modest budget that allows us to work on various development projects. The basic purpose of the fund is to protect the ecosystem, and we are working together with the governments of the sections to develop environmental conservation and cleanup projects. In addition, we are authorized to seek foreign funds to support our projects.

**EL COMERCIO:** On what projects are you working at present?

**Rodriguez:** The ECORAE has the responsibility for and is doing the work of promoting productive activity in the rural sector, but with full respect for nature. We are currently using a part of our budget to provide the farmers in Joya de los Sachas and Coca with incentives for the raising of nontraditional crops such as black pepper and palmetto. This is being done in view of the crisis created for the coffee growers by the drop in prices on the international market and the attacks made on their crops by infestations and plant diseases.

In addition, we have focused support on the craft and mining sectors, because we want to create new job opportunities for the region's residents.

**EL COMERCIO:** What are the prospects for ecological tourism in the Amazon region?

**Rodriguez:** The ECORAE has placed special emphasis on ecological tourism. The Amazon region is a favorable



area for the development of ecological tourism and scientific research. One of the projects we are coordinating with the Foundation for the Sustained Development of the Amazon Region is the opening of the first ecological corridor in South America. This corridor, 60 kilometers long, will cover and protect a very extensive area in the valley of the Sumaco Volcano. Plans call for the establishment of two scientific stations there to pursue studies of the zone. We now have the total support of the national government for the implementation of this project.

The ECORAE is working very closely with the Ministry of National Defense on some projects designed to strengthen national sovereignty in the Amazon region, Virgilia de Rodriguez said.

She noted that a guided-settlement program is under way in the area of the frontier with Colombia, where there is a need at present for a larger population of Ecuadorians.

The FFAA [Armed Forces] will take possession of the area needed to make the guided settlement of citizens possible within the Guepi trapezoid area lying between the San Miguel and Putumayo Rivers. There are plans to establish a base and a harbor-master's office in the port of El Carmen, in Putumayo, she emphasized.

The entire Amazon region of the country is the ECO-RAE's sphere of activity. It includes the Provinces of Sucumbios, Napo, Pastaza, Morona, and Zamora; the districts of Lago Agrio, Shushufindi, Gonzalo Pizarro, Cascales, Putumayo, and Sucumbios Alto, in Sucumbios; Tena, Archidona, Francisco de Orellana, La Joya de los Sachas, Aguarico, Loreto, Quijos, and Chaco, in Napo; Pastaza, Mera, and Santa Clara, in Pastaza; Morona, Sucua, Palora, Limon Indanza, Santiago, Gualaquiza, Huamboya, and San Juan Bosco, in Morona; and Zamora Yanzatza, Yacumbi, El Pangui, Chinchipe, and Nagaritza, in Zamora.



## BANGLADESH

### Norway Provides Grants for Education, Environment Projects

BK2604010294 Dhaka Radio Bangladesh Network in English 1530 GMT 25 Apr 94

[Text] Bangladesh will receive the grant of 21.5 crore taka from Norway. Two separate agreements to this effect were signed in Dhaka today. Under the agreements, 13.5 crore taka would be utilized for the projects to integrate nonformal education objectives of which [words indistinct] established. The comprehensive non-formal education system is to reduce illiteracy rate in the country. The remaining amount of 8 crore taka will be utilized for another project called National Conservation Strategy Implementation under the Ministry of Environment and Forest. Improvement of environmental management and conservation of biodiversity in Bangladesh is the main objective of these projects.

### Return of Toxic Fertilizer to U.S. Demanded

BK2404110094 Dhaka DAINIK ITTEFAQ in Bengali 19 Apr 94 p 1

[Text] A press conference held yesterday at the National Press Club under the joint auspices of the UBINIG [expansion unknown], the Society for Environment and Development, Nijera Kori, and the Association for Land Reforms [all of these organizations are NGO's] have demanded that the toxic fertilizer imported from the United States be returned. It was stated at the press conference that in 1991 Bangladesh imported 6,300 tons of toxic waste which was mixed with cadmium and lead. Of the total amount, 3,450 tons have already been used in Bangladesh. The remaining 2,850 tons of this poisonous fertilizer are now stored in godowns in different parts of the country. The officials of these organizations who addressed the press conference included Farhad Mazhar, Philip Gayne, and Shamsul Huda. They demanded that the government impose a ban on importing all waste into the country.

## INDIA

### Marginal Increase in Country's Forest Cover Reported

BK2904115194 Delhi INDIAN EXPRESS in English 19 Apr 94 p 11

[Text] New Delhi—The 1993 State of Forest Report, which is the fourth assessment of forest cover based on visual and digital interpretation of satellite data between 1989 and 1991, reveal that the forest cover in India in two years has increased by just 22 sq kms. This means an annual increase of just 1100 ha!

When the National Wasteland Development Board was set up in 1985, the then Prime Minister Rajiv Gandhi announced that five million hectares would be greened

every year. Subsequently this target was dropped as too tall and unrealistic an order. At the forest ministers conference on Monday, Environment and Forest Minister Kamal Nath said only 2 million ha a year could be greened. But going by the Forest Survey of India report even this is a tall order.

This indicates that the survival rate of the new plantations is not as glorious as recorded and the amount of forest land being diverted for so-called development projects is more than what is planted.

While the forest cover in Gujarat, Himachal Pradesh, Karnataka, Kerala, Nagaland, Rajasthan, Sikkim, Tripura, Tamil Nadu, Uttar Pradesh, West Bengal and Andaman and Nicobar islands has increased, it has decreased in Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Goa, Daman and Diu, Madhya Pradesh, Maharashtra, Manipur, Meghalayas, Mizoram and Orissa.

Reports from the seven North Eastern States are in particular depressing. While the dense forest cover (crown density of 40 per cent) increased by 31 sq km between 1991 and 1993, there was a decrease of 666 sq km in the open forest cover (crown density of 10 to less than 40 per cent) area. The worst culprits are Assam, which has 243 sq km less of forests, Mizoram—less by 156 sq kms, Meghalaya—less by 106 sq km, Arunachal Pradesh—less by 96 sq km.

In all North Eastern states forests continue to be devastated by shifting cultivation of jhoom [rotational crop planting] operation despite the Central government's efforts to stop jhoom. While 702 sq km of forests was lost in these states to the traditional practise of shifting cultivation, 281 ha was lost due to other reasons. However there was regeneration in 315 ha which had been felled for cultivation.

The total forest cover in the country is 6,40,107 sq km (excluding tea gardens), which is 19.47 per cent of the total geographical area of the country.

### Dangers of Nuclear Energy to Environment Told

94WN0251A Hyderabad DECCAN CHRONICLE in English 26 Feb 94 p 8

[Text] It was a curious coincidence. Last Tuesday, the Indian Express frontpaged a major PTI [Press Trust of India] story from Washington reporting how CBS 60 Minutes (one of American TV's most viewed shows) had alleged that India runs the world's most unsafe nuclear plants without inspection by the International Atomic Energy Agency while The Independent frontpaged, on the same day, a PTI report from Calcutta that Dr. P.K. Iyengar, Chairman of the Atomic Energy Commission and Secretary, Department of Atomic Energy in the Government of India had won this year's Jawaharlal Nehru Birth Centenary Award for his contribution in the field of atomic energy!

This is typical of India.

Even as one of the world's most respected news programmes on television accuses us of the most shocking crime possible, of running the world's most contaminated and dangerous nuclear power plants, with radioactive leakages and inadequate safeguards to protect those who work there, we are busy handing over one of the country's most prestigious awards to the very person who must be held responsible for the crime.

It is no use blaming CBS. The buyers for the 'Foreign Hand' theory are a vanishing breed today. We are welcoming foreigners into India with open arms and we should know that this eventually means a more open society in which wrongdoing can no longer be brushed under the carpet. Not even when the Government does the house-cleaning.

Dollars and the free information society come together and you cannot have one without the other. You cannot earn millions of dollars selling your carpets and, at the same time, hide the fact that your carpet industry criminally deploys child labour. You cannot welcome foreign tourists to your beach resorts and, at the same time, expect them to be blind to the fact that you are allowing hotel owners and rapacious commercial interests to encroach upon your beaches and destroy them.

You cannot expect visitors to come to India and, at the same time, hide from them the fact that you run the cruelest and most filthy abattoirs in the world, which produce meat that only the most insensitive and barbaric people would eat without protest.

More and more horror stories about our nuclear installations and environmental savagery are bound to hit the headlines worldwide and let us, instead of trying to brazenly lie our way through, confess to our crimes and set things right. There is enough time and opportunity. Let us change our attitudes towards crimes committed against nature and people. Let us force our government bodies to become more accountable.

Research by some of India's finest journalists have revealed, for instance, the simple and inescapable fact that India's atomic energy programme has been a dismal failure. What is worse, it has spawned serious and long-term environmental problems and it is time to order an open audit of the money that has vanished into the programme and the enormous damage it has done to our environment and public health.

Last month, *The Sunday Observer* (which has pursued the nuclear establishment over the past three years with single-minded zeal) revealed how contamination of soil, water, flora and marine organisms around our nuclear power plants have crossed emergency levels since a decade. Findings based on internal documents and public statements issued by the atomic energy authorities themselves reveal that hundreds of curies of the lethal, long-lived radio-active isotope Caesium-137

(along with many other radio-active species) are lying in public areas, just outside the Bhabha Atomic Research Centre [BARC].

This poisons underground water. It endangers the milk we get from cattle grazing in there. It contaminates marine life in the Thane creek and the fish and the crabs you eat have reached emergency radio-active levels as defined by bodies like the International Atomic Energy Agency and the International Commission for Radiation Protection, among others. It is not just the press that knows this. The officials know this. The government know this. And yet everyone digs his head into the sand, ostrich-like and pretends that the crimes will go away if we ignore them long enough.

Meanwhile, workers in these unsafe nuclear plants, visitors and people living in the contaminated zones around them are risking fatal cancers and genetic disorders. All because a few people at the top are unconcerned about international safety standards and are busy wooing the political establishment to win awards and accolades at the cost of the nation. CBS *60 Minutes*, reportedly, showed workers with burn marks and interviewed an American-trained Indian doctor who confirmed that due largely to radio-active contamination children are born in areas nearby without ears, with two thumbs and so on.

At an international meet some time back, a "responsible scientist" from BARC had, in fact, revealed data to show that our nuclear power plants were discharging about a hundred times the expected safe levels of radio-activity in the environment. International experts were aghast and the organisation concerned wrote to the Government of India about the disastrous long-term consequences of this steady poisoning of the environment by our nuclear power stations.

But more strange than this are some of the other games that BARC plays. Its senior most scientists, for instance, once connived to irradiate cheap diamonds to dangerous levels of radio-activity in the APSARA [expansion not given] reactor and peddled them at home and abroad as costly, natural "black" diamonds. While doing this, they were deliberately violating all safety procedures for tagging and shielding of radio-active sources leaving BARC. These irradiated stones were released for uncontrolled transactions in the diamond trade and the public would have never known, were it not for the vigilance of the press.

When caught, senior BARC officials tried to pass the buck to each other. Finally, S.D. Soman confessed to *The Sunday Observer* correspondent that using radio-active materials for cosmetic purposes was proscribed under international standards.

When called to Delhi to explain, Soman checked into Sion Hospital and did not emerge till the day of his retirement, after which he vanished overseas.

Huge investments have been made in these power plants—yielding puny returns. Our nukes, starting with

the first two indigenous reactors at Narora, cost the nation a staggering Rs 800 crore. That is, Rs 2 crore per installed megawatt. As against this, a conventional thermal power station costs Rs 1 crore a megawatt!

The nukes at Karakpur are estimated to cost even more—Rs 2.5 crore per installed megawatt, at the last estimate. Newer nukes will cost around Rs 3 crore. This means, at a conservative estimate, our nukes at Narora, Karakpur, Kaiga and Rawatbhata will make us sink in over Rs 4000 crore into nuclear power, whereas we could have achieved the same capacity at much less than half the price (and, in fact, much faster) had we had gone the thermal way.

The operating history of our plants is worse. The break even point for viability is 62 per cent capacity factor. Our new nukes do between 35 per cent to 40 per cent. So, by the Nuclear Power Corporation's own yardstick, their power production is a grossly losing venture. However, by sheer legerdemain, its manifest losses are shown as profits by treating government equity as an interest-free grant and by assigning subsidised costs to fuel, heavy water and other components made in DAE's [Department of Atomic Energy] establishments.

Despite such creative accounting, NPC [Nuclear Power Corporation] manages to show a profit of only Rs 100 crore per year on an investment running into so many thousand crore! Were it not run on public money, it would have been forced to roll down its shutters a long time back.

Even these creative profits come from the older reactors obtained from the USA (the Tarapur units) and Canada (the Rajasthan reactors) which, despite their vintage, continue to deliver cheaper and more reliable power than our indigenous white elephants. When these old units are phased out by the end of this decade, the financial picture will become even gloomier since we may have less effective capacity at that time than we have—and this faltering uncertain output will account for less than 1 per cent of the national power generation!

Compare this to the enormous damage done to public health and the environment and you will get a correct picture of what our nuclear power programme is all about!

The Government has woken up by limiting resources for current projects and deferring funds for future ones. So the NPC is borrowing money from the market through bonds which have to be repaid soon—and for which no sources of money are apparent. Even the debt burden of these bonds exceeds the yearly so-called profit of the Corporation. This is the typical picture of a bankrupt organisation, where liabilities exceed assets and the cost of debt servicing exceeds income.

Isn't it time that someone called an end to this preposterous charade instead of allowing awards and accolades to be piled on to people who are earning India a bad name all over the world and running a dangerous and

losing proposition under the pretence of leading India into a brave new hi-tech century?

The only man who can dare to take on the mighty atomic energy establishment, which is a law unto itself, is Prime Minister Narasimha Rao. The question is: Will he do it?

### **Dangers of Arsenic Poisoning From Drinking Water**

94WN0253A Calcutta THE STATESMAN in English  
27-28 Feb 94

[Article by Arnab Neil Sengupta]

[27 Feb 94 p 1]

[Text] With each passing day, the world's largest case of arsenic poisoning assumes even more alarming dimensions as tubewells in West Bengal disgorge contaminated water in block after block, village after village—this time in Calcutta's own backyard: the South 24-Parganas (pop. 5.7 million).

Even as the Centre and the State ignore the enormity of arsenic poisoning in five other districts of West Bengal, surveys conducted by Jadavpur University's School of Environmental Studies in the past several weeks have turned up shocking evidence of how many more lakhs of people are now threatened in areas hardly a few kilometres from the city.

On Saturday afternoon, as a team of scientists from the school, accompanied by doctors and environmental experts, arrived at Purandharpur, a village in Baruipur in the South 24-Parganas, they were besieged by scores of locals desperate to know the results of analysis of water samples taken from tubewells in the area by the team a week earlier.

Far away from the corridors of power of Calcutta and New Delhi, a quiet tragedy unfolded as the villagers, their faces shot with anxiety, took in the terrifying news: barring two, all the tubewells of Purandharpur had arsenic contents more than 30 times the recommended level! Water from these tubewells, according to the School of Environmental Studies, is unfit for cattle, not to mention human consumption!

For the school, which until now had been preoccupied with arsenic contamination in water elsewhere in the State, the finding of the dreaded metalloid in South 24-Parganas tubewell water was not something straight out of the blue.

Last year, after detecting arsenic in water in a Jadavpur locality, the team had taken some random samples from several villages in the Baruipur block and found arsenic in three. A week ago, the team went back for more samples and the results confirmed the team's worst fears: arsenic turned up in alarming concentrations in almost 80 per cent of the affected areas.



On Saturday at Purandharpur, in the crowd waiting for the results of the analysis of tubewell-water samples was Sankar Mondal (51), his body dotted with tell-tale signs of arsenic poisoning that doctors described as raindrop skin pigmentation. Mondal earns a living by playing the tabla, but that has been made increasingly difficult in the past few years by lesions on his palms and soles, a condition known in medical parlance as hyperkeratosis.

As the Jadavpur University team weaved through standing crops and hushed households of this South 24-Parganas village, the symptoms that Sankar Mondal bore quickly became a familiar sight. Skin afflictions apart, explained Dr. Jayanta Dasgupta of SSKM [expansion not given] Hospital as he examined the arsenic-affected locals, they were suffering from either conjunctivitis, enlargement of the liver or affliction of the nerves of the upper and lower limbs.

Purandharpur's residents are especially alarmed because the tubewell water used by more than 1,500 students of the village's educational institutions has been found to contain 35 times more arsenic than recommended!

Paying the price for human avarice are nearly 32,000 people in the South 24-Parganas alone, found till now to be drinking arsenic-contaminated water. The actual figure could be mind-boggling.

[28 Feb 94 p 1]

[Text] Niranjan Das, a resident of gram panchayat Ramnagar II in the South 24-Parganas' Baruipur Block, is counting his days. Years of drinking arsenic-contaminated water has irreversibly damaged his body's vital organs—a plight common to all four members of the Das family.

Yet, that's only part of the tragedy. During the past few years, Niranjan Das's mother and two sisters died one after another—all victims of arsenic poisoning; that, after five districts of the State, has now been revealed to threaten lakhs of people in the South 24-Parganas.

Out of the district's 30 blocks, Jadavpur University's School of Environmental Studies recently picked two and analysed tubewell-water samples from a total of 28 villages. Shockingly, not a single village has been found to be safe from the threat of arsenic.

Till now, the school has found nearly 9,000 villagers with arsenic-related skin lesions in the two South 24-Parganas Blocks that they have surveyed. However, according to Dr. D.N. Guha Majumdar, who heads SSKM Hospital's gastro-enterology department, not all who are suffering from chronic arsenic toxicity will show skin lesions. "Many might be affected internally," he said.

Not surprisingly, ignorance about melanosis and hyperkeratosis—arsenic-induced skin afflictions—is taking a heavy social toll in the villages. Wives are being sent back to their parents; finding grooms for daughters is proving an uphill task; and competent candidates are being turned down for jobs. Indeed, arsenicosis-affected persons are being treated not unlike leprosy patients in many of the districts.

SSKM's Professor Guha Majumdar, who has been collaborating with the Jadavpur University team in studying arsenic poisoning, says that safe drinking water and a nutritious diet can help reverse early damage caused by arsenicosis.

Till now, six districts of the State—Nadia, Burdwan, Murshidabad, Malda and the North and South 24-Parganas—have been found to be affected by arsenic-contaminated underground water. In all these places, the deadly metalloid has been gushing out of underground aquifers through water pumped out by tubewells.

An ever increasing demand for water—mainly for irrigation and partly for domestic use—has spurred more and more tubewells to be sunk. "This has possibly upset the underground geological balance, causing arsenic to leach out of the iron pyrite's crystal lattice," said the school's director.

The need of the hour, according to him, is to find out and isolate all the tubewells in the State spewing arsenic-contaminated water. Residents should be told to use only those tubewells whose water had tested arsenic-free.

"Our studies have shown that tubewells up to even 450 feet deep are not safe," said a scientist of the school. Studies conducted so far suggest that the deeper the well, the lesser is the chance of arsenic contamination.

To eliminate the scourge, the School of Environmental Studies, which is planning to convene an international seminar on arsenic poisoning in the State in January next year, advises boring tubewells deeper than 500 feet and monitoring their water quality constantly to keep tabs on the arsenic content.

Solution in the long run, according to wetlands experts, lies in proper management of water resources, conservation of rain and surface water, and planned utilization of ponds and water-logged areas.

Unless the Government moves in to stop the profligate spending of underground water, the experts warn, the fate of 30 million people in six districts of the State, could well go the same way as that of the more than 7.5 lakh people drinking arsenic-contaminated water in these districts now.

## RUSSIA

### Report: Russia May Dump Nuclear Waste in Kara Sea

94EN0280Z Oslo AFTENPOSTEN in Norwegian  
2 Mar 94 p 3

[Article by Ole Mathismoen: "New Report From Bellona: Russian Plans for Nuclear Dumping"]

[Text] Russia is considering whether to dump old submarine reactors in the ocean in order to solve the waste crisis that the START II agreement will lead to.

This sensational allegation appears in a new Bellona report published yesterday concerning the nuclear situation in northwest Russia. The environmental foundation has had access to hitherto unknown documents showing how and where Russia intends to dismantle 150 nuclear submarines.

The documents show that all future decommissioning of nuclear submarines, including vessels from the Pacific fleet, will take place in the shipyard city of Severodvinsk on the White Sea, southeast of the Kola peninsula. According to the START II agreement, Russia will decommission 150 nuclear submarines carrying 278 reactors in the next few years.

So far only two nuclear submarines, with four reactors, have been completely dismantled. The fuel rods have been removed from another 34 vessels, of which 16 come from the Northern fleet. According to the Bellona report, nuclear submarines with a total of 206 nuclear reactors and 45,000 used fuel rods will be dismantled at Severodvinsk.

In the Bellona report, which is the first comprehensive report concerning the nuclear situation in the region, a detailed overview will be published for the first time describing how the two enormous submarine yards in Severodvinsk will be upgraded in order to handle the huge dismantling job. The plan includes, among other things, the building of new dry docks, a new installation intended for the removal of fuel rods, improvements of the railroad from Severodvinsk to the nuclear city of Mayak in Siberia, and the construction of docking facilities for the storage of nuclear submarines.

"The upgrading of Severodvinsk was to have been carried out between 1993 and 1998 in order to receive the many submarines that will be decommissioned. However, several of the projects that should have been started last year are still in the planning stage. The uncertainty as to the responsibility and the financing might result in the postponement of the dismantling and destruction of the submarines. In the meantime the submarines are being stored in bays and fjords along the Kola peninsula, among other places," says the two authors of the report, Thomas Nilsen and Nils Bohmer.

### Full Storage Facilities

The definite plans for the improvement of the Severodvinsk docks that Bellona has had access to include only pure dock functions per se and a small increase in the capacity for the interim storage of nuclear waste. As all storage facilities for nuclear waste in the Kola region were filled to capacity a long time ago, new solutions must be found. The used fuel that is most radioactive will be carried to the nuclear city of Mayak according to the plan. But there is no place to send the reactors, the reactor sections and other solid radioactive waste.

"From the documentation we have received and from the talks we have had with different people, it has become clear that Russian authorities are considering two alternatives. One is to dump the waste in the Kara Sea as was done up through 1991. The other possibility is to build a new regional storage facility for solid waste," Nilsen and Bohmer say.

The two men express a great deal of worry over the nuclear situation up north:

"In addition to the 150 nuclear submarines that will be destroyed in accordance with the START II agreement, it is assumed that 80 Russian nuclear submarines will be taken out of operation because of their age over the next 30 to 40 years. As all storage facilities are full and there is no money to build an expensive new long-term storage facility, we fear that dumping will again become the only alternative. Maybe that is why Russia has refrained from signing the final London convention against such ocean dumping," Nilsen says.

It can be clearly seen from the Bellona report that the nuclear waste crisis in northwest Russia in no way has improved during the last year.

However, Bohmer and Nilsen say that what they fear most is the social [repercussions of the] nuclear crisis.

"Workers in the shipyard city of Severodvinsk, at the nuclear power plant, at Atomflot, and at the military Northern fleet are paid only rarely. It is not uncommon for them to go three to four months without being paid. The result is that they are careless with security. I fear that human error might lead to an accident long before the technical equipment actually fails," Bellona's nuclear physicist Bohmer says. Discarded nuclear submarines with intact reactors that are stored in the various fjords around the Kola peninsula need just as careful maintenance as nuclear submarines that are in operation.

[Box, p 3]

### The Ministry of Foreign Affairs Thanks Bellona

"Bellona has access to channels of communication and information that we do not have. That is why they compliment our work," Thorbjorn Norendal, the assistant director of the Department of Foreign Affairs, says. He is heading the preparation of a white paper on

nuclear safety in northwest Russia. The Ministry of Foreign Affairs has given financial support to Bellona's work in Russia.

"Bellona's new report is a factual and straightforward account of the problems," Norendal says.

He thinks that Russia probably will not resume ocean dumping. "However, the fact that this is under consideration shows how urgent the problem is. It is news to us that all dismantling of old nuclear submarines will take place in Severodvinsk. I fear that this will mean an accumulation of nuclear waste in the north. Unlike the United States, the Russians have made no plans for where to store all the old reactor sections. The thought that they will be floating in the water at the docks in the fjords around Kola is a frightening one," Norendal says.

He states that Norway's resources will not reach far in helping Russia. "However, we are prepared to participate in creating an international movement in order to help them with their disarmament, which will be just as expensive as the [original] armament was."

#### **Mission To Prevent Leakage From Sunken Submarine Discussed**

LD2004122094 Moscow *ITAR-TASS in English*  
1117 GMT 20 Apr 94

[By *ITAR-TASS* correspondent Mikhail Shevtsov]

[Text] Moscow April 20 TASS—"We should receive fuller information on the situation and conduct measures aimed at preventing or lessening a radioactive leakage from the Komsomolets submarine," said here on Wednesday Sergey Khetagurov, deputy minister for civil defence and emergencies, defining the main task of a Russian expedition to the area of the sunken submarine to be held next June.

He spoke at a working meeting of several ministries and departments which will participate in the expedition.

The mission plans to carry out comprehensive monitoring of the radiation, ecological and biological situation in the area of the submarine's wreckage with the use of advanced equipment and to realise several technological operations aimed at minimising a possible leakage of products of plutonium corrosion into the environment.

It is also planned to implement a unique operation at a depth of 1,700 meters to seal, with special hatches, six ports in the submarine's bow where there are six missiles, two of which are with nuclear warheads.

This will decrease the speed of water currents and minimise the leakage of products of plutonium corrosion. The operation on installing hatches will be simulated on the sub's specially built full-scale mockup. Meeting participants noted that there is no experience of conducting similar operations at such depths.

Khetagurov said in conclusion that the expedition is an expensive undertaking. Nevertheless, it is necessary for Russia and the entire international community. Therefore, it should be carried out at a high technological and organisational level.

#### **Moscow-Petersburg Fast Rail Link May Harm Environment**

PM2004104194 Moscow *ROSSIYSKIYE VESTI*  
in Russian 16 Apr 94 p 1

[Article by Candidate of Historical Sciences Vladimir Burov under the rubric "Reader's Comment:" "Why Do We Need a New Construction Project of the Century?" Asks Candidate of Historical Sciences Vladimir Burov]

[Text] There have been extremely few details given about the St. Petersburg-Moscow high-speed rail link. That is why the majority of us believe that the issue here concerns the modernization of the existing Oktyabrskaya Railroad. This is a great error! The high-speed rail link is set to pass through conservation areas in Novgorod and Tver oblasts and the Moscow region.

The high-speed rail link will be protected on both sides of the track by a three-meter concrete screen—a variation on the theme of the Great Wall of China. The territory of Russia's historic heartland will be divided in two although admittedly there will be some small crossing points for pedestrians and traffic. A fast highway and power lines will run alongside the high-speed track. In the conservation areas the no-go zone will be several hundred meters across. To that it should be added that according to the planners' scheme the route itself will become the axis for the formation of a megalopolis. In their fevered minds they have the idea (and it is being studied!) of creating a "two-headed capital city" on these ecologically fragile lands. The rapid development of these lands between St. Petersburg and Moscow will have unpredictable consequences—an ecological and cultural catastrophe.

Hundreds of hectares of plowland, meadows, and forests and archeological monuments will be destroyed by the scoops of the excavators at this construction project of the century. The special levees that will be built will upset this unique region's hydrology. This is the watershed of the Volga-Baltic water system. The blow will be struck at its "solar plexus." All these factors would be highlighted by an ecological expert appraisal but one has not been held and the construction workers are already prepared to begin work.

At local level in the oblasts and rayons there is a mounting protest from the population, scientists, and ecologists against the barbaric destruction of nature, archeological monuments, and the historical and cultural landscape. Individual rayons have withheld their consent to the laying of the track across their lands. The Russian Federation Committee for Land Resources and Land Management responded to that by issuing order no. 62 of 22 December 1993 confiscating lands in the



designated area along the entire route from St. Petersburg to Moscow for federal needs under the high-speed rail construction program.

At a session of the State Extradepartmental Expert Review Council of the Russian Main Administration for State Expert Review of Designs and Budget Estimates for Construction Work on 25 February an alternative to the high-speed rail link—the modernization of the Oktyabrskaya and Savelovskaya railroads—was proposed but without success. That would have been a European approach to the solution of the problem, combining the interests of protecting nature and cultural monuments with the need for technical progress.

### Foreign Press Accusations Against Pacific Fleet Criticized

LD1904090194 Moscow ITAR-TASS in English  
0835 GMT 19 Apr 94

[By ITAR-TASS correspondent Anatoly Yurkin]

[Text] Moscow April 19 TASS—The foreign press is accusing the Russian Pacific Fleet of discharging radioactive waste into the sea. It is characteristic that these accusations coincided with the beginning of the large-scale Russian operation "Fishing Season." The purpose of the operation is to put a stop to the depletion of fish stock in the Far East, particularly off the south Kurils, General Andrey Nikolayev, supreme commander of the Russian frontier troops, member of the Security Council, told ITAR-TASS.

He said that in addition to frontier guards and military aircraft, ships of the Pacific Fleet participate in the operation.

The effort to strengthen protection of national interest along Russia's eastern boundaries proved effective, as shown by communiques of the Supreme Command of the Russian frontier troops. A stop was put to ostentatious calls of groups of Japanese fishing vessels into Russian territorial waters and to large-scale poaching. Highly-maneuverable groups of ships promptly react to the situation and prevent violations of state border.

Far from everybody likes the normalisation of the situation in the Far East where Russia's neighbours have been permitting themselves lapses from the observance of the international norms and rules. Certain forces in Japan and in other countries of the region do not want the "thawing of glaciers" remaining from the past war. To thaw them by business cooperation and development of mutually-advantageous economic relations means to increase the might of the industrialised Japan and of the fabulously rich Russia. Experts believe that this does not suit rivals and that new portions of sensations are fed to the media.

The world public is aware that Russia does not discharge technological waste into the sea the way this is done by many other countries, Japan included. But going by

publications, also in TOKYO SHIMBUN, this is not the matter of radioactive waste but that of its being the product of the operation of atomic submarines of the Russian Pacific Fleet. This fleet of the Russian Navy is seen as a menace in the Pacific and in the world ocean. Some circles are ready to go any lengths to present an unfavorable picture of the Pacific Fleet. So they speculate on economic and technological difficulties of the utilisation of waste of atomic submarines.

### Legislative Action Urged on Safe Drinking Water

94WN0242A Moscow PRAVDA in Russian 30 Mar 94 p 8

[Interview with academician Boris Nikolayevich Laskorin, conducted by Igor Saltykov: "The Living Water Is Close to Death"]

[Text] It was not an argument that erupted in the academician's office, more like a little seminar on the subject of what it is that threatens our survival. Many countries around the world are having fits of ecological irresponsibility. The extraction of gold, silver, diamonds, rare metals, timber, oil, gas and coal is comparable, in terms of the effects of its merciless haste, only with the effects of the Ice Age. Fertile soils are being impoverished.

But the thing that is most tragic in its unnoticed frequency is the increasing absence of living water. Water is dying. And the death of water turned this seminar into a lecture/interview with Russian Academy of Sciences member Boris Nikolayevich Laskorin, chairman of the Russian Academy of Sciences Commission on the Protection of Natural Waters.

**Laskorin:** It is hard to believe that, of all the other natural resources, it is water that is being subjected to cruel and harmful effects on the largest scale. Today it seems that it is only being protected in wells. Yet it is being recklessly poisoned in rivers, in lakes and even in the seas. There are many sad examples of this in countries around the world. It is embarrassing to talk about the Aral Sea—it is dying. The rivers of Europe and America are being mercilessly polluted from source to mouth, and our own Volga River and the limitless Siberian rivers are no exception. True, there is no way to cover up individual disasters—massive discharges of industrial waste or fecal sludge. Condemnations are issued and resolutions adopted—urgent in name, indefinite in implementation. There have been cases not only of bans on drinking the polluted liquid, but even swimming in it. But as for the day-to-day, implacable degradation of water's living qualities, it is not merely forgotten—no one even notices it.

But the time has come to protect living water as if it were our greatest treasure. And to begin using it efficiently and conservatively at home and in industry. Otherwise no amount of doctors or pharmacies will be able to help us.

True, traditionally Moscow's water supply has been among the most drinkable as measured by world standards. The water supplied to the city is fully in compliance with public health and technical standards and not only meets but in several cases actually exceeds the quality of aqueous "raw material" in many large cities in Europe and America.

However, I should note that the standard in use around the world includes only a few requirements, and excessively general ones at that, regarding the quality of water sources for all uses. Thus far nowhere do we find clear definitions, and hence no implementation, of standards for two basic concepts: household water, consumed for purely natural needs—washing people and clothes, washing dishes, etc.—and drinking water, i.e. water that is suitable for internal consumption. Furthermore, at this point there is no clear definition of what is "drinkable," nor are there any clear-cut standards and criteria, and therefore the concept is sometimes interpreted in a rather arbitrary fashion, depending on views, needs, funding, etc.

I am convinced that the time has come to commence objective definition of standards and creation of an appropriate state standard for drinking water—water that is, I reiterate, for internal consumption. Whereas in Moscow total household water consumption is 500-550 liters per capita per day, drinking water consumption is only 2-3 liters. It is clear that that much consumption does not require a separate water supply. In order to ensure the necessary degree of purification, particularly under emergency conditions, I would recommend home installations, well, not installations, actually individual devices that attach to faucets and guarantee high-quality, truly drinkable water every time. And in the event of accidents the public should be provided with high-quality bottled water.

**Saltykov:** Which is already being sold at sidewalk kiosks and in stores. The price of a one-liter bottle is R1,500-2,000 [rubles]. Professor Viktor Doyenin has calculated that his pay is insufficient to pay for food and transportation, and is not even enough for tea and watery soups. Not for his whole family. Not even just for himself.

**Laskorin:** That cannot be! Incidentally, we are not selling domestically-produced water. This is obviously imported water. Yet transportation overhead is sizable just to transport water within Moscow, much less from Europe. The same goes for the technical expense of purification, which would not justify such high prices. If we were to start up production of bottled drinking water locally then it would be affordable not only to highly-paid segments of the population, but also to pensioners and school children.

**Saltykov:** Then allow me to read this November ITAR-TASS report: "Jordan has purchased from Russia devices that are without parallel anywhere in the world and which allow ordinary water to be used for the most unexpected purposes at minimal cost. Tap water

processed by a miniature electric activator becomes a powerful disinfectant and an effective medicine for many diseases, all without the addition of any chemicals." Prior to this interview I visited about 10 stores here in the capital, and no one had ever heard of these "activators."

**Laskorin:** That is unscrupulous, misleading advertising. Electrochemical processing simply cannot produce that quality of water. Unfortunately, even worse "sleight of hand" is being practiced. For example, in Moscow drinking water is being used in industry for production-related purposes, and in large amounts. Such use has repeatedly been banned, but the bans are ignored. Furthermore, many Moscow enterprises—industrial ones, not food-service enterprises—are drilling deep wells without any request for permission or authorization whatsoever, pumping artesian well water for industrial needs—the delicious, pure, living water that could serve as our most affordable drinking water supply. But even for that purpose we would have to calculate precisely how much of it we could use so as not to deprive our descendants of their inheritance.

**Saltykov:** So where are we going to get drinking water? True, just a quarter of a century ago there was talk about using Lake Baikal, and there was some discussion about how it could share its unique resources with the European part of the Soviet Union.

**Laskorin:** Unfortunately, the struggle to keep Lake Baikal pure is not over yet. Yet it represents 20 percent of the world's supply of very clean water, and 80 percent of the supply in the former USSR. Moreover, it has a unique and literally inimitable chemical composition. It could be bottled and shipped to Moscow even now. The obstacle is the cost of transportation, which is rising faster than inflation.

Meanwhile the dispute over the use of a major paper combine that pollutes Lake Baikal not only continues, but is actually heating up. Over the last 25 years the decision to shut it down has been made many times. Yet now it has been privatized and continues to successfully pollute Lake Baikal "privately." Plus, the "Baikal Commission" was established on the quiet and has been granted the right to allow private corporations to develop the combine, expanding production rather than curtailing it.

**Saltykov:** And so, Boris Nikolayevich, Lake Baikal is not accessible and the cost of bottled water is more than a majority of Russia's citizens can afford. Does that mean that city dwellers—and perhaps soon Muscovites as well—are going to have to go to the country and drill wells?

**Laskorin:** There is a solution. The drinking water that flows to each apartment should receive additional purification. The first steps have been taken with the manufacture of Rodnik [Spring] individual filtration units. A filter of activated silvered charcoal—the silver used is in very small quantities—kills hordes of bacteria and

completely removes organic, toxic and carcinogenic substances and heavy metals from water.

**Saltykov:** But they are still beyond the reach of a majority of the population. In November a household products store not far from your institution was selling the Rodnik filter for more than R6,000.

**Laskorin:** But what do 10 eggs cost nowadays? On our road to a free market we have run into a storm of distortions. But even if you take that madness into account, right now, in March, a Rodnik should not cost more than R3,000 in a state-owned store. And the Moscow government might even offer a special price to pensioners, students and impoverished teachers and instructors at higher educational institutions. There is definitely a need for immediate intervention by the Ministry of Health as well in order to perfect these little devices, approve them and demand that they be produced by state-owned industry immediately, even if only by a couple of the 2,000 idled defense plants.

The things we have discussed are urgent needs. However, so as not just to prevent death from dead water but also to lay the ground for major efforts on the living sources, deputies in the Federation Council and the State Duma should quickly draft and approve clear-cut state legislation on preservation of natural drinking water resources, the inexpensive production of drinking water, and the right of our country's citizens not only to land but also to clean water. Primary attention should focus on children's institutions, maternity homes, hospitals, schools and other educational institutions, and pensioners. And we should demand that scientists establish a definition of drinking water that is understandable to every citizen, every deputy and every administrator.

#### **Official Claims Nuclear Waste May Be Dumped in Sea of Japan**

LD1904063694 Moscow ITAR-TASS World Service  
in Russian 0600 GMT 19 Apr 94

[By ITAR-TASS correspondent Leonid Vinogradov]

[Text] Vladivostok, 19 Apr (TASS)— The liquid radioactive waste from Russian Pacific Fleet submarines may be dumped in the Sea of Japan, because it can't be disposed of otherwise at present. Tankers, anchored at the moorings of "Zvezda" works, are filled up to the rim with the waste and cannot take new deliveries of the dangerous shipment. This was stated today to an ITAR-TASS correspondent by Vladimir Ignatenko, the Russian presidential representative in the Maritime Kray.

He said that the government should have allocated funds for building a waste processing installation. However, not a single ruble has been earmarked for this purpose as yet. In the meantime, one tanker with 794 tonnes of waste on board urgently needs repairing. So, one should either stop the works, in order to [word indistinct] the

already critical mass of the radioactive liquid accumulated here, or dump the liquid in the sea. But this can't happen unless agreed by the Russian president, Vladimir Ignatenko said.

#### **State Environmental Protection Efforts Eyed**

PM2804160994 Moscow ROSSIYSKIYE VESTI  
in Russian 22 Apr 94 p 3

[Article by Natalya Davydova: "The Ministry Responsible for the Future"]

[Text] Under the new Constitution, we all have the right to a healthy environment and reliable information on its condition. The president's recent message to the Federal Assembly "On Strengthening the Russian State" laid special emphasis on the duty of all organs of power to create conditions conducive to improving the environment. After all, environmental safety is an integral part of Russia's national security. For a long time our country fought vigorously with nature, subjugated it, and transformed it, and now the time has come to settle the accounts. We are paying with our health and the future of our children. If we were to calculate the monetary equivalent, ecologists estimate that our country would need fantastic sums of money to bring the environment up to Western standards. Many readers write and ask who exactly in Russia watches over citizens' constitutional right to clean water, air, and soil. The question is more than relevant. Everyone has heard of the "Green" movement, "Kedr," and similar social organizations, but we also have state structures. How many are there, what do they do, and what are their responsibilities? We will discuss this under our new rubric, "Nature and Power."

The Russian Federation now has an established system of bodies responsible for environmental protection: a federal ministry, territorial subdivisions for the protection and rational use of natural resources, and a number of state bodies whose functions include monitoring and inspecting the use of certain natural resources and pollution of the environment: the State Committee for Sanitary and Epidemiological Supervision; committees for land resources and land management, geology and the use of mineral resources, fisheries, and water resources; a federal service for hydrometeorology and monitoring of the environment; and a federal forestry service.

A Higher Environmental Council is being formed in the State Duma. In addition, a Council for Environmental Policy has been set up under the Russian Federation president, and the Russian Federation Security Council has an interdepartmental commission for environmental safety. The General Prosecutor's Office has a department for supervising implementation of environmental protection legislation. In fact, there are special subdivisions responsible for environmental protection in the organizational structures of every branch of power.



We will start by acquainting ourselves with the country's main environmental department: the Ministry for Protection of the Environment and Natural Resources.

It enjoys the status of a federal ministry in the structure of organs of executive power approved by presidential edict in January. However, the work of the ministry, whose objectives are incorporated in its name, is not very well known to a broad audience. Moreover, the social status of our environmental department does not correspond to the status of similar structures in Western countries.

The structure of the ministry's central apparatus is as follows. The leadership forms the upper level. Below are the main administrations: environmental expert assessment; mineral reserves; science and technology; environmental safety; use of natural resources; environmental programs; nature reserves; natural biological resources; international cooperation; legal normative regulation; financing and development of materials and equipment; protection of the atmosphere; protection of the water table; the environmental protection maritime service; protection of soil and land resources; and protection of the environment from industrial and consumer waste. A federal environmental fund and a public reception center are attached to the ministry. As a whole, the structure of the central apparatus corresponds to the main areas of environmental protection activity. There are also shortcomings typical of state bodies in our country: the organization and administration department, for example, whose staff is more than double that of far more important subdivisions. I should point out for the sake of objectivity, however, that it is proposed to improve the ministry's structure.

Protection of the environment is one of the main national priorities of developed countries, where state environmental services have been in operation for decades. In our country, however, the environmental department is still in its infancy, as the RSFSR State Committee for Nature Protection was set up only in 1988; this was later transformed into a ministry, and the law "On Protection of the Environment," which is essentially the basis of the ministry's activity, came into effect only in 1992. Our main environmental protection department has undergone several reorganizations in the last five years, apparently whenever the ministry has been finding its feet and starting to monitor monopolistic departments responsible for pollution. Clearly, such reorganizations are not conducive to resolving environmental problems at state level and prevent the environmental protection department from fulfilling its basic tasks.

The Ministry for Protection of the Environment and Natural Resources should be responsible for general coordination of the activity of ministries, departments, enterprises, institutions, and organizations in the field of protection of the environment and natural resources; conduct an integrated science and technology policy in this sphere; develop and improve economic, legal, and

administrative mechanisms for the use of natural resources; organize and set in motion state commissions of environmental experts; and much more.

The ministry has a sufficiently sound research base: Under its jurisdiction it has more than 20 institutes and centers, whose main function is to form science and technology policy in the field of environmental protection. In addition, it can enlist the scientific potential of the Russian Academy of Sciences and state universities.

The ministry draws up specially targeted environmental programs. The best known is the federal science and technology program entitled "Russia's Environmental Safety," the drafting and implementation of which have had strong repercussions in environmental circles. Environmental protection problems are also reflected in other major programs: "The Revival of the Volga," "The Oka—a Clean River," "Waste," "Conversion—Ecology," "Radon," "Dioxins," and others.

First Deputy Minister Professor A.F. Poryadin has highlighted the following priority areas of the ministry's activity: First, it is vital to secure legislative and normative support for environmental protection activity and to adopt a complex of laws and legally binding acts in this sphere. The law "On Protection of the Environment" has undoubtedly played a positive role, but it is impossible to improve the environment in Russia without the system of environmental legislation that exists in Western countries. Second, there must be financial and economic support for environmental protection activity, so that the thin, constantly interrupted stream of budget funding is augmented by resources received on the basis of the principle "there are no free natural resources" and "polluters must pay." Finally, optimum organizational and structural support based on Russia's specific features will have considerable importance for the efficiency of all environmental protection activity in our country. There is no developed system of organization and collaboration between all the structures functioning in the environmental protection sphere. There are no clear responsibilities, while at the same time, for example, territorial environmental protection bodies are subordinate to the ministry, on the one hand, and to the local administration, on the other. In such cases there is always "confusion and hesitation," financial complications, a lack of responsibility, and the possibility of arbitrariness.

Ecology is part of the economy and politics, so drawing up a strategy in the environmental protection sphere is the state's prerogative. In this sense, the recent presidential edict "On the State Strategy of the Russian Federation To Protect the Environment and Ensure Its Stable Development" is more than topical. Having said that, it will require colossal efforts—mainly on the part of the Ministry for Protection of the Environment and Natural Resources and territorial environmental protection bodies—to achieve a breakthrough in the environmental situation in our country.

We will continue to acquaint you with various environmental protection structures and talk about their work and the problems facing them in coming issues.

#### **Russia, Norway To Cooperate in Burial of Radioactive Waste**

LD2804170694 Moscow *ITAR-TASS in English*  
1452 GMT 28 Apr 94

[By ITAR-TASS correspondent Aleksandr Shuvalov]

[Text] Moscow April 28 TASS—Russia and Norway have decided to cooperate in the building of a burial ground for radioactive wastes in Russia's far north and in organising a joint expedition to the sites where radioactive wastes have been submerged in the northern seas, ITAR-TASS was informed by the press service of the Russian Ministry of Ecology on Thursday.

Such decisions were the result of talks between Russian Minister of Ecology viktor Danilov-Daninlyan and his Norwegian counterpart Thorbjorn Berntsen. Also present during the talks were representatives from Russia's Atomic and Transportation Ministries.

Norway also plans to help Russia modernize the "Pechenganikel" metallurgical plant and assess the radioactive situation around the "Mayak" nuclear enterprise.

#### **Moscow Greenpeace Cited on Nuclear Fuel Deal With Finland**

MK2704093094 Moscow *KOMMERSANT-DAILY*  
in Russian 27 Apr 94 p 14

[Mikhail Lashch report: "New 'Greenpeace' Action. Finnish Police Break Up Antinuclear Action"]

[Excerpts] The international ecological organization "Greenpeace" held a protest action yesterday in the Finnish town of Loviza (110 km from Helsinki) in connection with the impending transporting to Russia of nuclear waste. The same day the Moscow branch of "Greenpeace" circulated a statement on the illegal nature of transporting nuclear waste from Finland to Russia. [passage omitted]

Talking to your *KOMMERSANT-DAILY* correspondent, Dmitriy Tolmatskiy of the Moscow branch of "Greenpeace" clarified some of the questions on bringing nuclear fuel to Russia. "The agreement on cooperation in the area of nuclear power engineering of 14 May 1965 between Russia and Finland contains not one word to the effect that the radioactive waste of processed fuel is supposed to be buried in Russia. The thing is that nuclear fuel becomes totally Finland's property the moment it crosses the border, and Russia bears no responsibility whatever for it. More, commitments on the return of fuel are not stipulated in the agreement." Mr. Tolmatskiy also underlined that literally every page in the agreement says that nuclear materials may only be used for peaceful means whereas the

"Mayak" combine (the biggest nuclear waste processing enterprise) is a military facility which, up to now, has been producing weapons-grade plutonium from used nuclear fuel.

#### **Lack of Funds Hampers Pollution Research**

PM2704155594 Moscow *ROSSIYSKAYA GAZETA*  
in Russian 23 Apr 94 First Edition p 4

[Roald Fedorov article: "What Danger Threatens Us?"]

[Excerpts] I recalled the stubborn buttercup when I heard Doctor of Biological Sciences I.V. Filyushkin's story about the effect of various physical and chemical environmental factors on living things. The effects of radiation in particular. Igor Vasilyevich runs the Biophysics Institute laboratory at the Russian Federation Ministry of Health. The work done by I.V. Filyushkin's laboratory involves studying the effects of low but constant doses on organisms, the mechanisms whereby these doses are administered, and also the level of danger involved. [passage omitted]

An analysis of data accumulated in specialist scientific literature has convinced I.V. Filyushkin that nervous health disorders similar to those noted in the descendants of those who survived the A-bomb hell of Hiroshima and Nagasaki can be caused by other nonradiation-induced factors. For example, similar aftereffects lie in store for children born to alcohol-abusing mothers. A significant increase in the frequency of congenital illnesses, first and foremost of the nervous system, and second of the immune system—which show up particularly noticeably in children in the form of various types of allergy—is linked to an increase in environmental degradation in industrial cities, primarily those where chemical production facilities are concentrated.

The similarity between the results of radiation and chemical exposure has made it easier to construct a theoretical model of the phenomenon. This was how the picture looked to Igor Vasilyevich: In addition to the cells of the embryo developing in the mother's womb, these harmful agents' main targets are the embryo's neural, immune, and endocrine systems. These represent a kind of "control center" which sends out signals determining the growth and specialization of all the organism's cells in accordance with its genetically determined development plan. But the impact of harmful agents results in the distortion of these signals. Cell growth is retarded and certain deviations from the genetic plan occur. At this stage, cells which have changed their properties send back signals to the "center" saying that its commands cannot be carried out. At this point internal restructuring of the "center" itself becomes a necessity. The endocrine system plays the most significant role in the formation of the three regulatory systems—after all, this is the system which is primarily responsible for carrying out the organism's genetic development plan. If this system is impaired, the

nervous and immune systems are more or less suppressed from the outset and remain underdeveloped from the embryonic stage. This is the cause of the corresponding congenital illnesses which occur when intrauterine development seemingly reaches a successful conclusion.

The truth of I.V. Filyushkin's theoretical model has been confirmed by experiments carried out in his laboratory. Small but constant doses of radiation applied to pregnant laboratory animals and similar doses of other environmentally harmful substances—heavy metal salts and other kinds of toxic chemicals contained in food and drinking water, specific contaminants in inhaled air, alcohol, and a number of medicines—produced similar effects on the health of these animals' young. No externally visible body defects were observed in the laboratory animals' offspring. However, a decreased capacity for learning was noted in comparison with identical animals born in environmentally normal conditions. Their immune defense system also turned out to be weaker.

I.V. Filyushkin's work offers convincing evidence of the similarity and unity of effect of radioactive and chemical contaminants on living organisms. Of course, these results certainly do not imply that small doses of radiation are absolutely harmless. But they are not the only danger threatening us nowadays. Other contaminants in our external environment, just like our disregard for our own health, can be even more dangerous. This is the basic solution to the problem of resettling inhabitants of areas that have suffered radioactive contamination in some way or other. Before resettlement takes place, we should compare the level of contamination and the attendant risk factor with the risk of moving to other areas designated for resettlement that are clean from the point of view of radiation but which may be environmentally dangerous in other ways. We should also bear in mind that the stresses associated with resettlement and actually waiting to be resettled could prove to be even more detrimental to health than exposure to small doses of radiation.

However, the research that has been conducted so far should be regarded merely as the start of a major task. The laboratory workers are preparing for this task with soundly based scientific research programs in this sphere. But there is no money—for the equipment, the expensive chemical reagents, or even to buy and keep laboratory animals.

I.V. Filyushkin's research is directly linked to many people's health in a number of industrial regions and other environmentally degraded areas. Extensive, profound, and intensive research is called for. Otherwise.... At this point it seems apposite to recall the following lines by Aleksandr Blok: "We will be cursed for centuries by our sickly descendants."

### **Yeltsin Approves Ecological Safety Commission**

*LD2504194194 Moscow Radio Rossii Network  
in Russian 1500 GMT 25 Apr 94*

[Text] The press service of the Russian president reports that Boris Yeltsin has signed a decree approving the composition of an interdepartmental commission for ecological safety, which will be part of the Security Council. (Aleksey Yablokov) has been appointed as chairman of the commission. The commission includes heads of a number of federal ministries and departments, including representatives from the weather and environmental monitoring services.

### **Report Says Damaged Nuclear Submarines Environmental Hazard**

*OW2004004394 Tokyo TOKYO SHIMBUN in Japanese  
18 Apr 94 Morning Edition p 3*

[Article by A. Poltov]

[Text] Vladivostok, 17 Apr—While attention is being focused on the Russian Pacific Fleet in connection with the dumping of radioactive waste into the Sea of Japan, at least four of its decommissioned nuclear submarines are tied to their moorings while being in quite a dangerous condition, because it is difficult to extract their nuclear fuel due to explosions or problems they suffered while they were in service. This was learned by a TOKYO SHIMBUN investigation on 17 April. In giving warning, a high-ranking Pacific Fleet officer stated, "The failure to deal with nuclear submarines that have previously suffered accidents is a more serious problem to safety in the Sea of Japan than is the dumping of radioactive waste into the sea."

These nuclear submarines that have suffered accidents or difficulties are three E-II class cruise missile submarines which have been moored at the Pabrovsk [name as published] base near Vladivostok, and one V-I class attack submarine which has been moored at the Kamchatskaya base. Between 1979 and 1985, all of them suffered difficulties with or explosions of their nuclear reactors due to malfunctions of their cooling systems. In August 1985, one of them suffered an explosion in its nuclear reactor, which killed 10 of its crew, due to a sudden rise in the temperature of its cooling water.

Decommissioned nuclear submarines usually are scrapped after they have been dismantled. However, these four submarines have been moored at their bases because it is difficult to remove their nuclear fuel because of the fear of large-scale radioactive leaks from their nuclear reactors. Although an institute of the Russian Defense Ministry is currently studying technology for the safe dismantling of nuclear submarines that have suffered accidents, the development of this technology has been greatly delayed due to the recent financial difficulties. Therefore, the outlook for dismantling these nuclear submarines is uncertain.



The high-ranking Pacific Fleet officer stressed: "Because the radioactive waste that is the focal point in the dumping issue is very low-level radiation, it causes no actual problems to human beings. However, troubles with nuclear submarines that have suffered accidents may cause serious problems affecting humans." Also, he added, "If we cannot speed up the development of new technology for dismantling them through assistance from Japan and other nations, this will have serious consequences."

#### **No Cesium-137 Detected at Radioactive Marine Sites**

LD2504174394 Moscow *ITAR-TASS* in English  
1654 GMT 25 Apr 94

[By *ITAR-TASS* correspondent Mikhail Shevtsov]

[Text] Moscow April 25 TASS—Preliminary marine pollution measurements taken from the sites of radioactive waste dumping by the former Soviet Union and Japan in the Sea of Japan did not reveal any Cesium-137 radioactive level fluctuations. These preliminary conclusions were reached at the end of the joint Russian-Japanese-South Korean expedition's first stage, which was undertaken with the participation of IAEA (International Atomic Energy Agency) specialists from March 18 to April 15.

The Russian Navy press centre told *ITAR-TASS* that the tests were conducted on board the Russian hydrometeorological scientific research ship "Okean" (ocean). The expedition helped obtain information about the real radioactivity and ecological situation in the areas of radioactive waste dumping by the navy of the former Soviet Union and Russia.

Detailed analyses of sea water samples, sea bottom sediments, animal plankton and organisms living on the sea bottom, will be carried out in laboratories of Russia, Japan, South Korea and IAEA and published as a complete report within one year at the end of the expedition.

#### **Latest Round of Talks With Japan on Radioactive Waste**

LD2304182994 Moscow *INTERFAX* in English  
1614 GMT 23 Apr 94

[Text] On Saturday in Vladivostok, a Russian-Japanese inter-governmental commission concluded the Russian stage of the discussions devoted to the search for ways to solve the problem of storage and reprocessing of liquid radioactive wastes which is very pressing for the Maritime territory today. The work is to be continued in Tokyo. On April 24 the joint delegation is to go to Japan.

In the course of the conference a concept of a complex approach to the selection of different means was presented to the Japanese party which proposes to the

Maritime territory its financial and technological assistance to solve the problem of storage and utilization of liquid radioactive wastes.

It was proposed to urgently start construction of a complex of surface stationary storage facilities for liquid radioactive wastes with the capacity 2000 cubic meters on the coast of the cape of Sysoyev which would have all necessary systems and mechanisms to prevent leakage of liquid radioactive wastes from the tankers TNT.

The second stage, namely designing and construction of an autonomous mobile floating complex to reprocess liquid radioactive wastes available and being generated in the Maritime territory (which can be dumped into the open sea), is to be implemented simultaneously.

As head of the Russian delegation Nikolay Yegorov, Russia's deputy Atomic Energy Minister and co-chairman of the Russian-Japanese committee on nuclear disarmament, underlined, the developed approach to the problem of liquid radioactive wastes in the Maritime territory expresses a single opinion of the Russian party and is proposed as the most acceptable variant in case the Japanese party finances the planned works.

#### **Former Inspector Alleges Nuclear Plant Dangers**

944K1103A Moscow *LITERATURNAYA GAZETA*  
in Russian No 15, 13 Apr 94 p 13

[Article by Vladimir Kuznetsov, former inspectorate chief of the Russian Federal Oversight of Nuclear and Radiation Safety Central District, with introduction by *LITERATURNAYA GAZETA* special correspondent Kirill Belyaninov, published under the heading "Russia May Turn Into a Chernobyl": "Nuclear Power Industry Through the Eyes of an Unemployed Nuclear Oversight Inspector"]

[Text]

#### **A Peaceful Atom for Every Home: Alas, This We Have Already Achieved**

I am sick and tired of it all. Of endless competition in the speed of printing documents fabricated by one political group in order to destroy another; of careful calculation of the arc of fire at the headquarters of hostile political groupings and pocket-size parties; the national pastime of watching the state of the liver of the also nationally elected president and of bringing in astrologers to tell us the dates and details of future coups. In the endless flak of arguments about how to conduct another revolution, we have somehow forgotten that there are far more real problems.

We have forgotten that in the Far East "friends and business partners" from North and South Korea will soon leave nothing—not even stumps—in centuries-old taiga; that 150 companies from America and West Europe are flooding the country with toxic waste in exchange for Russian metal; and that, finally, because of

our own negligence and indifference the threat of a new Chernobyl has become far more real than the threat of a coup.

I am sick and tired of it, because dozens of LITERATURNAYA GAZETA materials—and we wrote about it all: the “black market” in nuclear materials, the Western radioactive waste coming into our country, the catastrophic situation in the domestic nuclear power generation—did not elicit any response from our own government circles, which are busier attempting to reposition themselves in the shadow of the ruling chair.

I am sick and tired of it because the almost two-year-long struggle of Vladimir Kuznetsov, former Gosatomnadzor [Russian Federal Oversight of Nuclear and Radiation Safety] inspector, fired for his attempt to shut down 10 unsafe nuclear reactors, has not produced any results. Among the people he appealed to are the first persons in the Russian “ecological” establishment: presidential adviser A. Yablokov; Social-Ecological Union Chairman S. Zabelin... None of them supported Kuznetsov, while the truly horrible information he collected is still gathering dust in the safes of highest-level offices.

You need facts? There are many of them in the article V. Kuznetsov brought to the newspaper. Judge for yourself whether coup rumors are more important than something that affects our life.

#### Russia May Turn Into a Chernobyl

Last year I had an honor my “colleagues” in the line at the employment agency could only dream about. Can you imagine an unemployed American being invited as a consultant to the U.S. Senate, let alone the White House? Nevertheless, anything can happen in Russia, and an officially registered unemployed Russian may work for an equally official presidential adviser. There are numerous advantages to this method: If the finished report attracts the “highest attention,” there is no need to introduce the author, who has not gained any status in the nomenklatura; in the event of failure, however, one may resort to a tried and tested remark: “Well, you know, we have to use the services of questionable characters, but after all, we do not get any support from ministries and agencies....”

This in itself would not be too bad—one can swallow personal insult if the information you collected literally crumb by crumb did indeed bring about at least some result. But time goes on, and nothing changes. Presidential advisers shove the material you prepared to the back of the desk drawer; ecological organizations of the Social-Ecological Union and Physicians of the World for Prevention of Nuclear War type shrug their shoulders helplessly; and ministerial bureaucrats simply dismiss the facts and figures they are shown.

It is easy to understand the reason for such attitudes. All the reports and memoranda are devoted to the activities of only one, albeit very impressive agency—the Russian Minatom [Ministry of Atomic Energy], which has always

held the status of “sacred cow” in domestic industry. Nevertheless, let us try to sort out what is hidden behind the polished sign of the omnipotent ministry.

Radioactive waste disposal is perhaps one of the items at the top of the list of Russian ecological problems.

Existing capacities simply are insufficient, and the size and safety of storage facilities are limited, while construction of new ones involves immense expenditures of technical and monetary resources. At the same time, existing plans for dismantling nuclear arms and nuclear power generation systems far from always comply with the ability to safely store the resulting radioactive waste. At the end of 1992 the total area of contaminated land amounted to 52,263 hectares. Of them, 16 were recultivated over the year. According to official data of the Ministry of the Ecology alone, Russian Minatom enterprises have accumulated radioactive waste with a total emission power of 1.7 billion curies, which are kept in 227 storage facilities, and of these, 81 have already been sealed.

If only the problem were limited to the number of storage facilities, though! At some enterprises the waste is kept in the open; most solid radioactive waste disposal sites do not meet elementary safety standards. And the system of handling solid radioactive waste in our country not only does not meet IAEA [International Atomic Energy Agency] standards but is contrary to the practice of developed countries.

The problems of enterprises whose names have been mentioned in the world press for many years—Mayak Production Association (Chelyabinsk-65) and Siberian Chemical Combine (Tomsk-7)—still have not been resolved.

In 1992 the maximum allowable discharge of strontium-90 at Mayak was exceeded by a factor of 1.8. The waste was dumped into the Techa river. At the same time, at the Siberian Chemical Combine norms of discharge of phosphorus-32 were exceeded by a factor of 1.14. The average annual concentration of this radionuclide in the Tom river was 2.9 times higher than the allowable level.

In 1993 serious accidents involving radiation occurred at both enterprises. Serious and very representative commissions visited the sites; tonnes of papers were written, but no particular conclusions were drawn from the events. Suffice it to mention that the already approved program of replacing equipment presenting nuclear danger at these enterprises is still not being implemented.

This, however, is just a concrete case involving only two nuclear facilities. Of much greater interest is something else: In February of this year the Russian Gosatomnadzor, known in the past for the extreme caution of its statements, suddenly subjected the state of the Russian nuclear complex to sharp criticism. Inspection of practically all domestic nuclear installations showed that “the state of nuclear and radiation safety in the Russian Federation as a whole cannot be called satisfactory.

Numerous problems associated with the use of nuclear energy are being resolved extremely slowly and are not regulated by law..."

After such a serious statement, however, which for the first time indicated a split between Minatom and Gosatomnadzor, information came out which at first glance completely refuted the Federal Oversight's conclusions. The Rosenergoatom concern's vice president, B. Antonov, representing the main user organization, said that on the contrary, the safety of Russian AES's [nuclear power stations] has increased: There were 45 fewer incidents at stations in 1993 than in 1992.

For a specialist this is a strange argument, to say the least. The decline in the number of incidents is not at all an indicator of AES safety. Last year a considerable number of AES's were operating at reduced capacity. This happened because of the considerably greater length of the repair season at power generators of all stations: electric power consumers simply did not pay their bills on time, and the AES's did not have the money to buy materials and component parts in the needed quantities.

In addition, controller-imposed restrictions on capacities (up to 23.9 percent, plus the restrictions introduced by the Federal Oversight—26.1 percent of the rated level) together produce a figure equal to a 50 percent loss in power generation output. The figures above confirm not only the thesis of Rosenergoatom's imperfect—to put it mildly—calculations and the resulting conclusion regarding the increased safety of the AES's, but also bring up a no less important question: Can it be that electric power produced by AES's at the old level of output is not needed by the Russian economy, which constantly complains about energy shortages? And what has caused these restrictions if, in the opinion of Minatom bureaucrats, everything is going so well in their industry?

Somehow, the No. 2 and No. 3 generators at the Balakovo station and the No. 5 Generator at the Novovoronezh station, which had been under long-term repair, as well as Balakovo's No. 4 generator, which was recently brought on line, have disappeared from the list of AES's to be inspected. According to the results of last year, it was these stations' power generators, as well as those at the Kola AES, that were found to be the worst in terms of reliability and stability of operation.

In June 1993 a "medium-gravity incident" was registered at the No. 2 generator at the Balakovo AES—jamming of 11 regulation devices in the control and protection system; at the Novovoronezh AES No. 5 generator in February last year there was an incident classified as "insignificant": the water-chemical condition was off balance. At the Kola AES the incident was far more serious: As a result of a hurricane, high-voltage lines in the Kolenergo system were damaged, which resulted in the shutdown of all four of the stations' power generators.

As to work on increasing AES safety, this is not even on the agenda at this point. Actions in replacing technical channels at RBMK [high-power pressurized tube reactor] power generators and steam generators at power generators with VVER [water-moderated power reactor] reactors do not increase safety as compared to the design level—they only remove design faults discovered in the process of exploitation. Technical substantiation of safety factors at most power generators is still at the stage of development; there is no systematic substantiation of planned measures with respect to power generators' technical retrofitting and modernization. As to exploitation of all nuclear reactors and systems without exception, it is still being conducted in accordance with safety norms developed at the time they were built—that is, 15-20 years ago—and today does not even come close to modern standards. As to Minatom's contention that an IAEA commission that visited most AES's appraised their safety condition as satisfactory, this is no guarantee. The conclusions of various IAEA commissions are of a purely advisory nature and are not mandatory for compliance.

Nothing has changed since then, and our power generation industry is still ruled by the kilowatt-hour, not by safety.

Speaking of research nuclear installations, the situation with respect to them is even more difficult than that with nuclear reactors. The reason is not only the extreme obsolescence and physical wear and tear of the equipment and technological systems, but also the absence of practically any norms and safety systems. There is no normative-technical documentation; there is no state-wide program of utilization of research systems, which would allow a definition of the necessary volume of work on these systems; there is no system for localizing accidents, and no simulator facility for personnel training.

The situation with respect to spent nuclear fuel at scientific research centers that use nuclear reactors is critical. In the NII [scientific research institute] of Atomic Reactors in Ulyanovsk Oblast, in the Physics and Energy Institute in Kaluga Oblast, and in the Kurchatov Institute in Moscow, facilities for storage of spent nuclear fuel are filled to 80-90 percent of capacity, while the technology for reprocessing it simply does not exist.

The practice of liquid radioactive waste disposal in the NII of Atomic Reactors simply does not have any analogues. Medium- and low-activity waste in Ulyanovsk Oblast is simply pumped underground into so-called "absorbing collector beds." As a result, more than 2 million cubic meters of waste with a total activity of 100,000 curies have already accumulated in underground storage. By law, however, waste disposal can be done only after it is "converted into solid explosion-, fire- and nuclear-proof form." In other words, waste must be converted into a form that ensures its reliable isolation in a geological medium.



Fifty years of operations of the Russian scientific center Kurchatov Institute produced an extremely difficult problem associated with rehabilitation of land set aside for temporary storage, and taking off line obsolete research systems. At the territory of the institute, which is located in the heart of the city of 9 million inhabitants, temporary storage—which, by the way, has remained "temporary" since the time it was built in the 1940's—occupies an area of two hectares. It is estimated that it contains more than 200 tonnes of highly radioactive waste.

Normative documents, which have been at the development stage since 1989—nuclear safety rules for research reactors and many others—will not come out any time soon. The explanation is simple: The Kurchatov Institute is the leading scientific organization with respect to almost all Russian research reactors, and it is apparently not in its interests to introduce stricter safety regulations. This will require considerable financial investment and bringing the system to the required level or shutting it down.

The shortcoming and problems I have enumerated involve the activities of only one agency—the Russian Ministry of Atomic Energy, as well as of the structures it has set up. But even in the new political environment the methods Minatom utilizes for solving its problems remain the same old ones. As in the past, the atomic industry is trying to "twist the government's arm." Otherwise how can one explain the clamor recently raised by this agency in the press? (A good dozen newspapers published the outcry that nuclear stations are running out of fuel during the peak period of fall-winter demand, and soon nearly half of Russia will be without heat and light unless a number of decisive steps are immediately taken.) But the answer to this question is not that complicated: Having bungled things up once again, Minister V. Mikhaylov is trying to cover it up by grabbing a juicier chunk of state subsidies. It is no secret to anyone that both enterprises producing nuclear fuel and nuclear power stations are under the roof of one and the same agency, and therefore what we have is obviously an elementary miscalculation. Neither does Minatom's panicky tone fit with the recently signed agreement to sell nuclear fuel to the United States. If we cannot provide for ourselves, how can we talk about selling it to other countries?

Nothing will change unless in the nearest future a package of legislative acts is adopted on the use of nuclear power generation, and a state safety program is drafted and backed up by priority financing.

Without this first step, nothing will change. And who knows, perhaps in just another 10 years Russia will turn into a huge Chernobyl zone.

**Ministries Implore Premier on Dumping in Far East**  
*MK2204072094 Moscow NEZAVISIMAYA GAZETA*  
*in Russian 22 Apr 94 p 1*

[INTERFAX report under the "In Brief" rubric: "Caring for Purity of Seas"]

[Text] As has become known from informed sources, Russia's Foreign Ministry and the Ministry of Environmental Protection and Natural Resources have forwarded to Premier Viktor Chernomyrdin a joint statement speaking of the need to resolve as soon as possible the problem of liquid radioactive waste in the Far East. In order to prevent yet more radioactive dumping in the Far Eastern seas, the document suggests that radioactive waste processing units be urgently manufactured and delivered to the Far East. It is suggested that 5 billion rubles from the government's reserve fund be set aside to support these and other urgent measures.

**Norwegian Report Views Kola Nuclear Problems**  
*PM2204121294 Stockholm SVENSKA DAGBLADET*  
*in Swedish 18 Apr 94 p 7*

[Bjorn Lindahl report: "Russian Nuclear Waste Worries Norway"]

[Text] Oslo—While a group of Norwegian politicians were visiting Russia's Polyarnyye Zori nuclear power station on the Kola Peninsula on 5 March a group of technicians rushed in and began to screw down the top of one of the reactors. Only a month later did the members of the Environment Committee hear that there had been a leak of radioactive water.

A growing number of worrying aspects of the way Russia handles its nuclear reactors and nuclear waste on the Kola Peninsula are coming to light in similar ways.

"The more we look into the problem of nuclear waste on the Kola Peninsula, the more we have come to realize how enormous is the cleanup operation that must be carried out and how small a role Norway can actually play. An international mobilization is needed to solve the problems."

So said Norwegian Foreign Minister Bjorn Tore Godal who also wants a more dramatic appeal to public opinion. Norway is trying to get the rest of the world to take an interest in what is happening on the Kola Peninsula which, because it is far from the centers of population in Europe, is not being given priority in the international work on the environment.

As part of this work a Norwegian public report has been written on nuclear safety and chemical weapons on the Kola Peninsula. The problem can be summarized as follows:

—There are 150 nuclear-powered military vessels in the Northern Fleet, the majority with two nuclear reactors on board. Some 50 of these have already been phased out, but only on a few has the spent and highly radioactive nuclear fuel been removed from the reactors.

- There are eight nuclear-powered icebreakers which have nowhere to store their nuclear waste. This is therefore being stored on board the ships which are docked in major population centers.
- Safety at the Russian nuclear power stations is poor. On the Kola Peninsula two of the four reactors are of the so-called VVER [light water reactor] type. This type of reactor has been classified as a high-risk reactor by Western experts.
- Russia has dumped nuclear waste and whole reactors in several locations in the Barents Sea. The sunken and damaged submarine, Komsomolets, is also on the sea bed off Bear Island.
- Novaya Zemlya is today Russia's only test site for nuclear weapons.
- According to international disarmament agreements Russia must destroy a large part of its chemical and nuclear arms. This is an operation which could have major environmental consequences if it is not carried out in a manner which ensures safety.

The Norwegian foreign minister is unable to give any figure for how much it will cost to make existing reactors safe, build dumps, and clean up after past emissions.

"The figure is in any case so large that a Norwegian national budget would not go far," he said.

The report estimates the cost of breaking up the 90 submarines which are expected to be ready for scrapping in 1998 at 18 billion kronor. In addition money will be needed to build installations to receive, treat, and store the nuclear waste. According to information from the Russian authorities, the Northern Fleet's storage facility for radioactive waste in Lista Fjord is almost full. If this is true, this is a serious problem, the report states. Long-term storage alone for the reactor sections from the 60 submarines which have been phased out requires 40,000 cubic meters of storage space.

So far the Norwegian Government has not given more than 36 million kronor to various environmental projects on the Kola Peninsula—and 20 million of these went to improvements to safety at the Murmansk nuclear power station.

"This is not a reflection of our level of ambition. Our contributions and those of others must be increased many times over," he said.

In the last two years the Norwegian and Russian authorities have mounted two joint expeditions to measure radioactivity in the Barents and Kara seas. A third expedition, to the Abrosimov Bay on Novaya Zemlya, will now be undertaken after a long period in which the Russian authorities refused to grant permission.

The investigations carried out so far show, however, that radiation in the Barents Sea is very low. It is half the level in the North Sea and the level in the Baltic is 18 times higher.

The report nevertheless expresses concern that radioactivity will leak out from the underground tests that have been carried out on Novaya Zemlya. A satellite study which the Norwegian Foreign Policy Institute has carried out has shown three craters between 75 and 250 meters in diameter left by explosions and in another location a whole valley has collapsed.

Internal developments in the Soviet Union and later in Russia have led to greater openness about and more attention being paid to the country's environmental problems. But developments have also made it more difficult to solve major national problems. The economic and political situation is unstable and it is more difficult to reach agreement on what priorities are to be adopted. The report's depressing conclusion is that not even with comprehensive international efforts can any rapid solution to these problems be expected.

#### **'Komsomolets' Administrative Muddle Making Radiation Disaster**

94WN0246A Moscow NEZAVISIMAYA GAZETA  
in Russian 29 Mar 94 pp 1-2

[Article by Andrey Bayduzhiy: "Safety: Radiation Disaster in Norwegian Sea Is Almost Inevitable; Departmental Muddle Causing Country To Lose Last Chance To Make Nuclear-Powered Submarine Komsomolets Safe"]

[Text] In a few days, on April 7, it will be exactly five years since the loss of the submarine Komsomolets and 42 of its crewmen in the Norwegian Sea. As the tragedy recedes into the past, it no longer evokes such keen interest. And this can easily be explained: In the time since the Komsomolets went down, Russians have witnessed a sizable number of disasters and accidents.

A brief surge in attention to the Komsomolets problem occurred in September 1993, when the fourth expedition to study the site where the submarine sunk returned from the Norwegian Sea. Its findings were extremely alarming. Using the Mir-1 and Mir-2 deep-sea units, it was able to ascertain that the casings of two of the Komsomolets's nuclear torpedoes had been almost completely eaten away by rust and that they would leak plutonium far more quickly than had been expected. The expedition gave late 1994 as the most likely date.

Despite such bleak forecasts, however, the specialists studying the Komsomolets problem were confident that a radiation disaster could nonetheless be prevented. They had rather compelling grounds for optimism. A Committee for Special Underwater Operations (CSUO) was created to coordinate all efforts in this area, and a project was devised for sealing the submarine and its

nuclear cargo right on the seafloor using a special substance known as khitozan, which has high sorption properties. Repairs on the research vessel Akademik Keldysh were completed in Germany, the Mir units underwent repairs in Finland, and contracts began being concluded with Russian enterprises for deliveries of equipment. In addition, CSUO chief Tengiz Borisov managed to do the almost impossible: Financing for all operations involving the Komsomolets was included in the state order. Preparations for the main operation, scheduled for June through August 1994, went into full swing.

But the overconfident CSUO officials failed to take one thing into account. Departmental muddle and bureaucratic ambitions in Russia can be far more terrible than any natural disaster or technical difficulty. And these two "natural calamities" have posed an insurmountable obstacle to solving the Komsomolets problem. The CSUO was abolished on January 10, 1994, in connection with the establishment of the Russian Federation Ministry for Emergencies, and its functions were transferred to one of the new structure's administrations. As is often the case, the changes took considerable time, during which preparations for the expedition itself had to be forgotten. While the expedition was the only "headache" for the CSUO, for the leadership of the Ministry for Emergencies, with all its other concerns, solving problems relating to a submarine on the bottom of the faraway Norwegian Sea proved by no means a top priority, something that was quick to have negative consequences.

In early 1994 the plan for sealing the Komsomolets was approved by a session of the Security Council's interdepartmental commission on environmental safety (better known as Aleksey Yablokov's commission) and forwarded to the Russian Ministry of Environmental Protection for expert environmental review. However, the fact that the project had lost its sponsor led to a situation in which there was no one to "push" it, and processing of the document at various levels slowed sharply. The first session of the expert environmental review group was held only on March 22. Instead of assessing the environmental danger or, on the contrary, the dangers of the sealing project, the council's members opened a new discussion of the operation's expediency per se and other possible options for rendering the Komsomolets harmless. The commission promises to present its conclusions only by May 25. By that time it simply won't make any sense to evaluate anything: Even if the recommendation is a positive one, the expedition will no longer be able to put out to sea. Preparations for it will take at least two to three months, and without the expert environmental assessment no financing of expedition-related operations can begin.

A radiation disaster in the Norwegian Sea is exceedingly probable. The countdown is no longer in months or weeks but days. Meanwhile, a lack of interest in accelerating efforts to prevent it is being shown by not only the

Russian Federation Ministry of Environmental Protection and Natural Resources, but also by the Ministry for Emergencies. And while one can still understand the unhurried actions of the Ministry of Environmental Protection, the position of the department that now bears full responsibility for the Komsomolets's fate seems inexplicable, at first glance. However, the paradox has a simple explanation: The leadership of the Ministry for Emergencies has all but the greatest interest in scuttling the expedition to the shipwreck site!

If the Akademik Keldysh, with the Mir units aboard, does put out to sea all the same and the operation, God forbid, collapses at sea, full blame for the collapse will rest with incompetent ministry officials who were unable to think through all the details. And that such an outcome cannot be ruled out is borne out by several facts. Sergey Khetagurov, former chairman of the North Ossetian Council of Ministers, who switched chairs to become deputy minister for emergencies, has been put in charge of all measures relating to the Komsomolets. What can an official who lost an election in a completely landlocked republic know about underwater operations? On the other hand, three months after the creation of the ministry administration in charge of the Komsomolets problem, it has just one member—Reserve Rear Admiral Mikhail Tolokonnikov, former deputy chief of the old CSUO. But even that specialist was recently deprived of his governmental communications link and moved into an office with a single city telephone. If the expedition to the Komsomolets collapses, ministry officials will be able to blame the mistakes and muddling within their own ministry on seemingly objective difficulties caused by the delay in obtaining expert environmental review and the lack of financing. And so departmental interests have proved stronger than the national interest.

Meanwhile, the problem of making the Komsomolets safe has taken on a new, international aspect. It is no secret that sizable financial resources are being enlisted for this; having caught the scent of money, representatives of the most diverse organizations, pursuing their own interests, are descending on Russia like moths to light. One such organization is the Komsomolets Memorial Foundation, which was created in Holland and has announced to the entire world that it is raising funds to raise the submarine. In 1993 the foundation managed to raise about \$140,000. To properly assess this amount, it must be said that Russia itself spent an incomparably greater sum—\$4 million and 1 billion rubles—on operations relating to the Komsomolets in that same year alone. But not even all of the money collected by the foundation reached Russia in the form of purchased computers; part of it stayed behind in Holland.

Still, one could only welcome such assistance from a private organization—especially considering that the foundation promises to make available a further 2 million guilder (just over \$1 million) in 1994—were it not for the fact that its outwardly selfless actions conceal other, far less altruistic considerations. Provision of the



funds—which, incidentally, the Dutch government, not the foundation itself, intends to provide as aid to Russia—is contingent on a number of conditions, chief of which is that the Dutch firms Smith and Heerem [Kheyrem] be hired as the main contractors in operations involving the Komsomolets. They are both part of a Dutch consortium that carries out underwater operations. In other words, the foundation has assumed the role of lobbyist for Dutch interests in matters relating to the Russian submarine. However, that is not the end of the problems. In the final analysis, in order to avert an environmental disaster, we could sacrifice the interests of Russian industrialists. Were it not for one "but." Hiring for the project Dutch firms that do not have deep-water units at their disposal but do own hoisting cranes will most likely lead to a fundamental revision of the entire plan of action and to replacement of the plan to seal the submarine with a plan to raise it. In that case, it will no longer be possible to mount an expedition to the Norwegian Sea this season, and an environmental disaster will become almost inevitable. In the summer of 1995, there will be an underwater Chernobyl at the Komsomolets site: By that time the submarine's torpedoes will be destroyed completely, and no one and nothing will be able to stop plutonium-239 from leaking out.

In experts' opinion, the consequences of the impending catastrophe will be very grave. The section of the ocean where the submarine lies is one of the most productive, accounting for 80 percent of all fish taken from the Norwegian Sea. The losses to Russia from reduced catches alone, as well as from fines paid to other countries, above all Norway, will amount to hundreds of millions of dollars a year. In addition, rather large suspended radioactive particles that can be transported by currents were found at the Komsomolets site in August 1993. In the event of massive plutonium discharges that will continue for several years, the strong underwater currents in the region, which reach speeds of 1.5 meters per second and change direction several times a day, will lead to the rapid contamination of several thousand square kilometers of seafloor. Considering that the half-life of plutonium is 24,000 years, the sea in that region will be closed to fishing for 600 to 700 years.

#### **Bureaucratic, Budgetary Factors Delay Caspian Efforts Protection**

94WN0245B Moscow *SEGODNYA* in Russian  
24 Mar 94 p 9

[Article by Svetlana Konstantinova: "Caspian Awaits Its Fate; Hopes Pinned on Nature's Favors"]

[Text] Four cities and 109 rural communities that are home to 197,000 people are in danger of being inundated by the Caspian Sea. The total land area that could be submerged is 1,072,000 hectares, 473,000 of which are farmland. The projected direct economic loss in 1991 prices is 17.2 billion rubles.

There have been six major fluctuations of five to 10 meters in the Caspian's level in our era. Each one has devastated populated coastal areas and caused the destruction of many points of civilization. Specialists believe that global climatic changes largely determine water levels in the Caspian Sea. For example, while for nearly a century, from 1837 to 1933, the sea's level fluctuated insignificantly within a range of -25.3 to -26.5 meters, from 1933 to 1977 its level dropped by 290 centimeters, from -26.1 to -29 meters. Beginning in 1978 the Caspian's level began rising an average of 13 centimeters per year, for a total to date of 212 centimeters (-26.9 meters). The trend toward rising water levels remains stable. It cannot be ruled out that the sea's level will reach its critical mark of -25 meters in the next 15 to 20 years.

Meanwhile, the ecological, sanitary-epidemiological, and medical-biological situation in the Caspian's coastal areas continues to deteriorate. Surface and subsurface waters are polluted with toxic substances and petroleum products, soil salinization is progressing, and infectious diseases and outbreaks of skin ailments and allergies are occurring over a widening area. Incidentally, this is confirmed by geochemical studies of soils, bottom sediments, and surface and subsurface waters in coastal cities; their findings have revealed the presence of toxic substances in concentrations that are tens of times in excess of the maximum allowable levels. Despite an unending series of acts and decrees adopted at various levels and apparently intended to save the territory from the "deluge," ecological conditions in the region are viewed as critical.

A federal program for the Caspian, spanning the period up to 2000, was drawn up in 1993. Researchers at institutes of the Russian Academy of Sciences, the Russian state meteorological service, the Russian Ministry of Economics, Moscow State University, and other leading research and design organizations were involved in drafting the program. It must be said that all the attempts made to prevent an ecological disaster during a three-year period were hindered by inadequate appropriations from the state budget and their use for other than the intended purposes. Russian Federation government decree No. 37 of January 19, 1993, set financing sources and volumes for various measures; they provide for capital investments of 1,021.45 million rubles (in 1991 prices) in 1993-1995. The clients were executive government agencies of Federation constituent members. According to the Russian Ministry of Finance, the following amounts of the established ceilings had actually been allocated as of January 1, 1994: to Dagestan, 65 percent; to Kalmykia, 49 percent, and to Astrakhan Oblast, 72 percent. Of these sums, the following amounts were expended on urgent measures: by Dagestan, 75 percent, by Kalmykia, 36 percent, and by Astrakhan Oblast, 25 percent.

The studies' findings allow one to conclude that the level of the sea will continue to rise up to 2005 to 2010. Scientists currently disagree on whether the rate of the

rise will stay within the range observed in previous years (an average of 13 centimeters per year) and reach the point of -25 by 2005 to 2010 or whether it will slow. However, the second scenario is more likely, given increased evaporation rates and additional outflow from the Caspian Sea into the Kara-Bogaz-Gol Gulf and undrained depressions on the territory of Kazakhstan.

A promised federal program for solving social, economic, and environmental problems relating to the rising level of the Caspian was not submitted to the Russian State Construction Committee for consideration in January of this year. "Since the program is lacking," said State Construction Committee spokesman Timashev, "it is wrong to promote any particular hypothesis (effluent balance) to the detriment of others, such as the geotectonic hypothesis." Mr. Timashev is convinced that such "promotion" would overshadow the main issue—the need to accelerate efforts to protect the cities and communities.

It is hardly appropriate in this situation to speak of the adoption of any sort of "urgent measures." There remains, contrary to Michurin's well-known saying, to pin our hopes on nature's favors.

#### **Danilov-Danilyan on Russia's New Concept of Environmental Protection**

94WN0245A Moscow *SEGODNYA* in Russian  
26 Mar 94 p 10

[Environmental Protection Minister Viktor Danilov-Danilyan interviewed by Dmitriy Frolov: "Viktor Danilov-Danilyan: I See No Grounds for Pessimism"]

[Text] Viktor Ivanovich Danilov-Danilyan became Minister of Environmental Protection and Natural Resources in 1991, immediately after the Soviet Union's breakup. *SEGODNYA* has already reported about the book the minister helped write, a book that sets forth a new environmental concept for Russia. The concept is based on avoiding environmental crimes characteristic of nascent capitalism and preserving the natural reserve we inherited from the centralized administrative system. A golden mean is always desirable but almost never attainable in practice. By contrast, the idea of a special Russian path seems forever popular.

Frolov: Viktor Ivanovich, can it be that the idea of a so-called unique Russian path is attractive to environmentalists as well?

Danilov-Danilyan: I am absolutely against viewing Russia as an exclusive country, in any case in the sense of its searching for ways to harmonious coexist with its own nature. Everybody has to review approaches of protecting the environment—the United States, Europe, Japan, third-world countries. Russia's uniqueness consists in that virtually one-third of its territory has never been subject to economic influences. We are confronted with special problems from the standpoint of protecting it, but we will have to solve them. In doing so, we should

by no means pit ourselves against the rest of the world. On the contrary, we must integrate our own efforts into the environmental protection efforts of mankind. The Rome Club's famous slogan urging people to think globally but act locally has become obsolete to a significant extent. In any case, there is not a single post-industrial country that has not already used this path. Nevertheless, pressures on the biosphere continue to mount.

Frolov: Why is it that in Russia, with its devil-may-care attitude toward the environment, to put it crudely, the situation is not as disastrous as commonly thought?

Danilov-Danilyan: We are saved only by the circumstance that Russia occupies 12.5 percent of the world's land mass, while just 2.5 percent of the world's population lives on its territory. Meanwhile, Russia's "contribution" to the pollutants produced throughout the world is 10 percent, which is four times greater than average indices. If other countries allowed themselves to do the same, the Earth could not withstand it. It is very fashionable to talk about geopolitics these days, but most of those who discuss this topic do not realize that this in particular is its chief aspect.

Frolov: It is equally fashionable to say today the Russian population is declining. Wouldn't the reverse process be an even greater problem, considering the harm we have caused to the environment, and consequently to ourselves?

Danilov-Danilyan: Rutskoy and Khasbulatov also talked about "genocide" and said the blame for it rested with the Gaydar government. Such ignorance may be excusable for a military man, but for a doctor of economics? Rejection of the principle of high birth rates occurred in the 1920s and 1930s. What is happening today was, if not 100 percent, then 90 percent foreordained by the preceding development of demographic processes.

Traditional perceptions of a favorable or unfavorable demographic situation are flawed from an ecological standpoint. We are now confronted with the need to take into account the factor of relative overpopulation. It is not enough to simply look at the ratio of the able-bodied to non-able-bodied population; we must take into account the possibility of higher productivity on the part of the able-bodied segment of society, something that will be able to support more "dependents."

Our problem is that Russia, while experiencing relative overpopulation as expressed in overconsumption of resources, does not have an efficient economy or efficient production.

Frolov: But modern science-intensive, energy- and resource-conserving technologies are the primary means of protecting the ecosphere from the onslaught of civilization. In this respect Russia doesn't have too many chances.

**Danilov-Danilyan:** Nonscience-intensive production is dying out, regardless of what anyone might like. For the simple reason that it is worn out. Its continued use is becoming either physically impossible or economically ruinous. More and more money is needed for repairs, and such production consumes more and more raw materials and energy and produces more and more wastes, for which we are also having to pay today. In addition, it is no longer profitable to produce obsolete equipment today—it is extremely materials-intensive, and enterprises that produce such equipment are the main ones that are failing economically. And so we see here a mechanism of natural selection, even though, of course, one might like to artificially stimulate it. The claim that nothing is being modernized or built in our country is nonsense. Last year alone, environmental experts analyzed 64,000 design documents. We sent only 4 percent of them back for further work. Not one of the others failed to meet environmental-protection requirements. And so in contrast to many people, I see no grounds for deep pessimism.

**Frolov:** So the current state of our science, which is instrumental in the emergence of new technologies, doesn't make you pessimistic?

**Danilov-Danilyan:** In recent months all I hear is that science is dying. The same thing was said over and over in the United States about American science 30 to 35 years ago. At that time the USSR launched the first satellites, and the Americans panicked. They calculated that we had 10 times more people going into science than they did. Then they began talking in utter seriousness about the intellectual death of the nation. People in our country are saying in horror that scientists are going into business. I don't see anything wrong with that. Now when they leave the country—that is indeed dangerous.

Moreover, we have an enormous backlog of research projects. And even if we are experiencing a pause—so what, we'll survive. In general, we underestimate the role of social self-organization. We are used to regimentation and rigid planning, but no society lives like that in a transitional period.

**Frolov:** Unfortunately, not only do we have an obsession with planning; we have also failed to outgrow our passion for classifying anything and everything. We have learned the truth about the environmental situation in Russia thanks to the fact that many documents have been declassified. Now a presidential edict has authorized the Ministry of Environmental Protection and Natural Resources itself to be a "classifier." How do you intend to exercise that right?

**Danilov-Danilyan:** First, we never petitioned to obtain that right. Second, we view it not as an opportunity to classify things, but on the contrary, to lift the ban on publishing information that does not constitute a state secret. For example, we intend to publish the declassified

section of the Russian register of radiation objects. But it would be absolutely naive to think that the text is utterly devoid of secrets.

In general, environmental information can be used to gather a great deal of information affecting national security. For example, a great deal can be learned from satellite surveillance of the behavior of birds carrying sensors about the size of a thimble. Naturally, more traditional methods are also widely used. So the decision adopted doesn't surprise us in the least.

**Yablokov Reviews Environmental Problems, Options**  
*94WN0243A Moscow TRUD in Russian 22 Mar 94 p 102*

[Interview with Aleksey Vladimirovich Yablokov, head of Interdepartmental Commission of Security Council on Environmental Issues, by Vadim Karpov; date and place not given: "Aleksey Yablokov: 'It Is as If We Are Living in a Garbage Dump!'" ]

[Text] The country is experiencing an exceptionally frightening crisis (in addition to all the rest). The world around us is expiring. Nature is dying. Are there any rivers where the water can be drunk without fear? Are there any meadows which have not been ruined by chemicals and acid rain? Is there any place at all where we can breathe just one whiff of truly clean air? What lies ahead, and what is our present situation? These were the questions with which our interview of Aleksey Yablokov began. He was B. Yeltsin's adviser on ecology until recently, and he now heads the Interdepartmental Commission of the Security Council on Environmental Issues.

**Karpov:** It does not seem that long ago that there were environmental rallies and demonstrations throughout the country. They damned the bureaucratic system and tormented administrators. "Hands off," "We will defend".... Now we do not hear a thing....

**Yablokov:** I cannot deny the obvious decline of interest in ecology, but why should we be surprised by this? People have other problems: prices, crime, political instability.... They worry about staying alive, about having enough to eat, and about surviving bloody massacres....

Meanwhile, the average lifespan has decreased dramatically in recent years. It was 70 years in 1986, but now it is 65. One of the main reasons is the dismissal of environmental problems, and it is sheer insanity—even in these insane times—to remain silent. I am already 60. According to Russian standards, I have no more than 10 years left, but if I lived in America or in Switzerland, I could look forward to another 15-18 years. Is this a significant difference? There I would live long enough to play with my great-grandchildren, but the people in some cities here can only hope to make it to retirement age....



Why is our average lifespan so short by civilized standards? I can explain. From 50 to 60 percent of our longevity depends on socioeconomic circumstances. Malnutrition and poor eating habits, stress, smoking, alcohol.... More people are dying of suicide than of ischemic heart disease. Traffic accidents are killing more people than cancer. The state of our health is 20-30 percent dependent on environmental conditions and only 7-8 percent dependent directly on health care.

Are our objectives clear? We have to build highways, improve transportation systems, and regulate traffic more effectively. We have to fight against alcohol abuse and against the poisoning of food with harmful additives. We have to protect ourselves from radiation, heavy metals, and dioxins....

Around 16 percent of our territory is in a dangerous ecological state, and that is where more than 20 million people are living. Now we have another problem: An abundance of toxic waste from the West is heading in our direction. It is thousands of times cheaper to dispose of it here, and that is why it is coming here through legal channels and, in the majority of cases, through illegal ones as well. We have no strict laws to control this, and the laws we do have are not being enforced.... It is as if the whole country is living in a garbage dump and is doomed to degeneration and extinction.

**Karpov:** But Russia is on the verge of disaster—the non-payment crisis, the endless debts, work stoppages, bankruptcies.... Any fine could drive a whole industry to its knees.

**Yablokov:** I cannot deny that. If you were to go abroad, you would see how clean and neat everything is there. Everything is well-kept, without any industrial chaos, because each piece of land has an owner, and the owner pays for each meter.

Obviously, fines would not solve the problem. Not right away. But there is another option: An enterprise director is asked to reduce harmful atmospheric emissions in the next two years. Until that time, the payment of the fine is deferred, so to speak. He can think about it, ask for suggestions, try different solutions.... At the end of the two years, if there are no changes for the better, please pay the fine. This is already being practiced in hundreds of cities. And it is essential that the fines be spent exclusively on environmental projects.

These are two methods of control on the governmental level, but there is also a third: compensation for damages to property and health. In principle, this is a declared right. As usual, however, no specific mechanism has been developed for this: People do not know how and where to file claims and how to calculate the amount of compensation.

**Karpov:** The effectiveness of the "mechanism" also seems dubious. How many attempts have been made, and how many articles have been published in the press, to prove that the most harmful emissions are connected

with specific enterprises? All of it has been futile. The managers of production units always talk their way out of it.

**Yablokov:** Yes, it is true that proving this is difficult, but it is not impossible. A few well-publicized trials will teach them a lesson. You could say it would have an intimidating effect.

**Karpov:** How?

**Yablokov:** By letting them know that each of us, in principle, could demand any amount of compensation, and that this could absolutely ruin the polluting enterprise. All enterprises in the West are living under this Damoclean sword, and this forces them to clean up their operations.

**Karpov:** But you are not a foreigner, Aleksey Vladimirovich, and you know what people here think of hazardous production units. They act upset, but then they go back to work in, for instance, the radioactive shops so that they can earn higher wages, get an apartment, and retire a few years earlier. Women give birth to sick children who suffer from asthma and allergies, they also get sick, and then they die prematurely, but they have other concerns—the prices of sausage and furniture.

**Yablokov:** Yes, sadly enough, that is our mentality. In the Chernobyl zone, after decontamination the local residents took the radioactive soil home so that they could keep collecting "funeral benefits".... All of this calls for persuasion, explanation, convincing arguments....

**Karpov:** By the time we convince them, there will be nothing but mutants left in the country....

**Yablokov:** If we do not want to admit that we are living in a pile of crap—excuse the expression—we deserve the life we have. We are showing contempt for ourselves and for the future of our children and grandchildren.

Then why should we worry about the drop in the birth rate and the reduction of our population? Do you know that almost 60 percent of our infants are unhealthy?! Only one out of every nine or ten adolescents is healthy.

How did we reach this point? This happened because the USSR acted like a besieged fortress for decades. All of its energy and resources were used for defense. Under 20 percent of "their" workers are employed in industry, and it is probable that only one out of every twenty is working for the "defense establishment," but in our country one out of every two workers is employed in production and one out of every five is connected with the "defense establishment." Only 18 percent of our labor force works in the service sector, but "over there" it employs half of the labor force.

**Karpov:** It seems as if the Aral and Caspian seas were forgotten after the breakup of the USSR....

**Yablokov:** Not quite. As soon as the CIS was formed, the republics concluded an ecological agreement. They

reached an agreement on monitoring and the exchange of information, and also on mutual financial support. At that time, in 1991, they decided to conclude separate agreements on the Aral and Caspian seas. The agreement on the Aral Sea was signed, and the agreement on the Caspian is being negotiated. Lake Baykal has not been forgotten either: A large representative commission has been set up on the governmental level.

The Azov Sea has become a sewage pit in recent years. More and more beaches have been closed, and the fish are dying. We cannot do anything about the Azov Sea without the cooperation of Ukraine.... An agreement is being drafted at this time. An international agreement was concluded by Turkey, Bulgaria, Ukraine, Russia, and Georgia to save the Black Sea.

The move to the market has already made some changes for the better, if only because administrators now have to count their money. Not long ago, several chemical combines were using petroleum-based paraffin in the production of protein and vitamin concentrates. There was public indignation....

**Karpov:** I remember how the CPSU Central Committee used to convene journalists for meetings with branch managers and how they would use charts and diagrams to prove that criticism was unfounded, that there was no danger, and that all of this was a figment of the reporters' imagination.

**Yablokov:** Yes, all of the proof boiled down to the argument that our agriculture and animal husbandry would collapse without these concentrates. Now the market has forced them to calculate their costs and realize that it is more profitable to sell the paraffin. The receipts from a tonne of raw material can pay for two tonnes of soybeans. A tonne of paraffin, meanwhile, produces only 700 kilograms of protein and vitamin concentrates. In addition to everything else, however, there was the departmental factor, and there was always the strategic defense objective of absolute self-sufficiency, so that we would never need help from anyone else. In the 1960s the Politburo ordered the development of agriculture for the satisfaction of all of our own food requirements, and that was the start of the reliance on protein and vitamin concentrates. They were supposed to lift agriculture out of the pit. Incidentally, nuclear power engineering also began to be developed here as a "by-product," because we needed nuclear weapons. We needed plutonium for bombs, and it comes from the irradiated fuel of nuclear power plants.

In the 1950s they started telling us how important pesticides were for heightened productivity. By 1988 they had increased pesticide applications to 2 kilograms for each hectare of plowed land. We know the results: bare store counters and millions of tonnes of imported grain. Now we cannot afford to buy pesticides. Applications are only one-fifth or one-sixth of the previous amount, but this has not reduced the yield.

We do not plan to buy any grain this year. Better storage methods have reduced the amount of waste products in the garbage heap. The economy works. Just five or six years ago we never even imagined anything like this.

All of this is good for the environment. We do not have to use as much land for crops or to flatten marshes and country roads with tractors for the augmentation of our plowed areas. We can start restoring our forests, creeks, and springs.

**Karpov:** Meanwhile, the land is also becoming private property. Do you have any fear that it will be sold to rich people with no intention of plowing the land or planting anything?

**Yablokov:** Of course I do. In the Security Council we recently discussed the threat posed to national security by the depletion of soil fertility. We discussed the more intelligent use of land resources. Today the restoration of the fertility of our anemic soil is our number-one objective. A presidential directive on this is being drafted.

**Karpov:** But you cannot go into a private forest or reach the sea on a closed beach....

**Yablokov:** You are wrong. You can go into any forest in Europe or America, sometimes even without the consent of the owner (as in Switzerland). There are restrictions, of course: You cannot chop wood or build fires.... Some of these restrictions extend to the owners of the forests. As far as the sea coast is concerned, the shore in most countries is public property, and there are laws against building anything on the beaches or making them inaccessible.

**Karpov:** You were the president's adviser on ecology. Did you have many meetings with Boris Nikolayevich?

**Yablokov:** Unfortunately, they were too infrequent last year. That is one of the reasons I asked the president to release me from my duties as an adviser and give me more freedom to take action.

**Karpov:** Did you get this freedom?

**Yablokov:** I think so—as the chairman of the Interdepartmental Commission of the Security Council on Ecological Security. Our commission can discuss any aspect of environmental security, and it is our job to analyze the state of the environment in the country and draw the proper conclusions. We have already drafted some interesting proposals in conjunction with the Ministry of Defense on the creation of ecological forces. In conjunction with the Russian Federal Oversight of Nuclear and Radiation Security and the Ministry of Atomic Energy, we drew up proposals on the improvement of radioactive waste handling and disposal. There are also proposals on the prevention of ecological terrorism and all types of accidents and disasters.

**Karpov:** The president recently published an edict on the state strategy of environmental protection. Will it help in improving the situation?

**Yablokov:** The new Constitution grants the president the authority to define the basic guidelines of domestic and foreign policy. The edict was compiled in accordance with this. It is of colossal importance: It defines the principal guidelines of Russia's actions to secure ecologically safe development under market conditions and to protect the human living environment. It assigns priority to the restoration of environmentally distressed regions and to Russia's participation in the resolution of global environmental problems.

Now it is the government's turn—it is supposed to propose a specific plan of action in two months.

**Karpov:** What are you hoping for?

**Yablokov:** I hope we can use new technology and new economic relations to climb out of the environmental quagmire. You know that the whole world views us as a slovenly neighbor. We are dirty, and we are polluting everything around us. We have no choice at this time: If we do not surmount our environmental problems, we will die. I still think we can surmount them.

#### **No Funds Allocated for Radioactive Waste Storage**

*OW2104125794 Vladivostok Radiostantsiya Tikhyy Okean Maritime Network in Russian 0715 GMT 20 Apr 94*

[From the "Pacific Ocean" program]

[Text] The dumping of radioactive waste from Pacific Fleet submarines might be forced by the fact that there is nowhere to store the waste. Tankers with waste docked near the factory wharf of Zvezda in Bolshoy Kamen are filled to capacity, and can contain no more dangerous cargo. An ITAR-TASS correspondent was told this by Vladimir Ignatenko, representative of Russian president in the Maritime Kray. He said the government should have allocated funds to build a facility for processing the waste, but not a single ruble has been allocated for this purpose so far. Meanwhile, one of the tankers, which contains 794 tonnes of waste, is in a dilapidated condition. Either the factory has to be stopped so that the already critical mass of radioactive liquid will not increase, or else it has to be dumped at sea. However, this may take place only after coordinating it with the Russian president, said Vladimir Ignatenko.

#### **Danilov-Danilyan Says Large Areas Environmentally Unsafe**

*LD2004192194 Moscow INTERFAX in English 1608 GMT 20 Apr 94*

[Text] There are adverse environment conditions over as much as 20 percent of Russian territory, Environment Minister Danilov-Danilyan said in Moscow on Wednesday. He said his ministry demanded a special resolution to prevent Russia from further dumping of liquid nuclear waste into the Sea of Japan.

He said the Ministry for Foreign Economic Relations was not entitled to issue licences for imports of nuclear

waste from other countries until after the go-ahead from environmental experts. However, the minister said that much too often, nuclear waste was imported into Russia under the guise of materials intended for reprocessing as evidenced by a recent incident in Orenburg.

The minister denied media accusations that Prime Minister Viktor Chernomyrdin signed a deal on imports of liquid nuclear waste from Hungary for reprocessing in Russia. He blamed Atomic Energy Minister Viktor Mikhaylov for signing this deal instead.

The minister said the agreement did not go through an ecological safety study and "is therefore illegal."

Danilov-Danilyan called for a review of all previous international agreements on nuclear waste disposal in Russia to be followed by parliamentary ratification.

#### **Pacific Fleet Command Told To Comply With Nuclear Safety**

*LD2004215894 Moscow INTERFAX in English 1347 GMT 20 Apr 94*

[Text] The administration of Primorsky Territory has accused commanders of the Pacific Fleet and management of a local factory of failing to comply with safety standards for storing nuclear waste.

Its statement says that more than 2,000 cubic meters of liquid nuclear waste was kept in fleet and factory-owned tankers moored in the Bolshoi Kamen bay, most of them unfit for durable storage.

As a result, radiation levels in the region have risen, according to findings by an interdepartmental commission of inquiry. The commission said radiation levels had doubled in the engine department of a TNT-5 tanker which was written off two years ago and were several times in excess of background radiation in the bay itself.

The regional authorities have given the fleet command and factory management until April 25 to comply with safety standards for nuclear waste storage.

Earlier, the commission had agreed to the dumping of a load of liquid nuclear waste held in the TNT-5 tanker into the Sea of Japan.

#### **Three-Nation Search Finds 'No Danger' From Nuclear Dumping**

*OW2104064494 Vladivostok Radiostantsiya Tikhyy Okean Maritime Network in Russian 0715 GMT 20 Apr 94*

[From the "Pacific Ocean" program]

[Text] The international Russian-Japanese-[South] Korean expedition aboard the scientific research vessel Okean recently conducted a survey of regions for the storage in the Sea of Japan of the Pacific Fleet's liquid radioactive waste.



Measurements of the concentration of radioactive matter in seawater, sediments on the ocean's bottom, and vegetation and animal life showed that everything was within the norms of natural background [radiation].

This confirmed again that the recent dumping of waste carried out in October 1993 posed no danger.

#### **Report Shows Russia's Beneficial Impact on Global Warming**

94WN0244B Moscow KOMSOMOLSKAYA PRAVDA  
in Russian 24 Mar 94 p 2

[Article by Andrey Pavlov, under rubric "Sensation": "Russia—The Country of Sighs"]

[Text] According to data obtained from the RF [Russian Federation] Academy of Sciences, the domestic flora absorbs more carbon dioxide than is produced on the entire Russian territory. It follows from this that our country, with all its antediluvian industry and its smoking transportation is doing its best to save mankind from the greenhouse effect. These unexpected results that were achieved after prolonged experiments and miscalculations, are apparently capable of giving trumps not only to our industrialists in the fight against the "Greens," but also to the politicians who are discussing ecological problems on an international level.

Sergey Kurayev, chief of the Climatic Programs Department of Rosgidromet [Russian Hydrometeorological Service], states:

"The chief contribution to the global warming of the climate is made by carbon dioxide. It is not by accident that the developed countries have pledged to stabilize emissions of this gas. The United States, for example, 'blow' into the atmosphere 22 percent of the worldwide emissions of carbon dioxide, which is more than Russia (11 percent) and China (10 percent) combined. But, in our opinion, the crux of the matter is not how much you emit, but, rather, how much you take back. Currently at the negotiations dealing with the convention, a question that is being raised sharply is whether one should employ the balance-sheet approach: to require a country to report on the difference between emission and absorption. Otherwise, in accordance with the currently accepted methodology for making computations, the largest polluter of the earth's atmosphere is Luxembourg: the country is minuscule, there are no forests, but there are a tremendous number of motor vehicles."

As became known recently, 4.2 billion tons of carbon dioxide "goes into the sky" annually from the territory of Russia, and 4.62 billion tons is absorbed. The total result is that 420 million tons of carbon dioxide is absorbed annually by our forests. (Although there are other opinions on this score.) The most interesting thing is that there are few people who can venture a guess about our negative balance with regard to carbon dioxide. In any case, when I mentioned this at a recent meeting with officials from the German Ministry of Ecology, the

Germans' eyes bulged out. I shall quote a few lines from a report written by RF Academy of Sciences academician Zavarzin: "The obtained results definitely indicate the role played by Russia and other countries in the humid zone of the Northern Hemisphere as being the Earth's lungs. Contrary to the generally accepted opinion, the countries in the tropic zone are not absorbers of carbon dioxide on a world scale."

#### **Implications of Decline in Ecological Movement Examined**

94WN0244A Moscow NEZAVISIMAYA GAZETA  
in Russian 16 Mar 94 p 2

[Article by Andrey Bayduzhiy, under rubric "News" and subrubric "Carte Blanche": "Forget About the Ecology?: Clean Air as Payment for Economic Survival"]

[Text] Not too long ago the pages of NEZAVISIMAYA GAZETA were the arena for heated polemics between Viktor Danilov-Danilyan, minister of environmental protection and natural resources, and Aleksey Yablokov, chairman of the Interdepartmental Commission (MVK) for Ecology, of the Security Council. If one discards the mutual personal dislike that is typical of Russian administrators, the essence of the differences of opinion expressed by the two respected ecologists and *ex officio* state figures can be summarized as opposing evaluations of the state of the natural environment—which is almost apocalyptic, according to Yablokov, or one that suggests restrained optimism, according to Danilov-Danilyan. Accusing each other of incompetency, the learned gentlemen, who indisputably occupy, in today's ecological table of ranks, the first and second places (I shall not undertake to make a judgment about who occupies which place), cite extremely weighty arguments as the basis of their positions. And it would scarcely be worthwhile for a journalist to interfere in this almost scientific discussion if it had not revealed an underlying natural law that it would be a mistake to ignore. Despite all the difference of the views expressed by the administrators of Minprirody [Ministry of Environmental Protection and Natural Resources] and the MVK, they completely coincided in the view that the resources available to their departments and, in particular, the executive power's vertical line in general for resolving or at least mollifying the ecological problems are obviously inadequate, and that new steps are necessary here.

Being consistent individuals, neither one delayed in putting his words into action. Viktor Danilov-Danilyan, as a member of Russia's Choice, continued his march into power and, intending to achieve the development of civilized environmental-protection legislation, added to the title of minister the rank of deputy to the State Duma. Aleksey Yablokov, on the contrary, declared politics to be an unworthy matter and, as a sign of protest against President Boris Yeltsin's ignoring of ecological problems, submitted his resignation from the position of his advisor on ecology and the protection of health, while

reserving the right, even after leaving the MVK, to concentrate completely on the creation of a broad ecological movement.

The opposing nature of the actions taken by people who possess in Russia ecological power to the highest degree only seems to be such. Actually it attests to a situation when a few ecologists, professionals and amateurs, have been completely deprived of public attention and support, while remaining one-on-one with numerous problems. The hopes shared by the optimists, among whom Danilov-Danilyan himself was included, that, after the upsurge of the ecological movement in the second half of the 1980's and its damping as a result of the economic and political crises in the early 1990's, the population that had adapted to the new realities of the democratic market would turn its gaze to the mess in the ecology, were not justified. The results of the recent election serve as the best confirmation of this. The "Green" party, which united the activists of the ecological organizations, having failed to collect the necessary 100,000 signatures, came crashing down as early as the registration stage. The Cedar bloc, which made statements under ecological slogans, despite an intensified advertising campaign, suffered as a result a no less impressive defeat and, with 0.1 percent of the votes, ended up in last place. Incidentally, as for Cedar, whose voter list included just about anyone, so long as he was not an ecologist, that movement, which had been created shortly before the beginning of the election campaign, did not recommend itself by anything in particular, other than tinsel advertising posters with elements of ecology, and, after its defeat, went back into the underground, presumably until the next election.

Such a crushing defeat for the ecological bloc cannot be explained simply by its fractionation or lack of organization. Both situations, of course, exist, although one of the leaders of the Socioecological Union, enraged at an item published in NEZAVISIMAYA GAZETA on the eve of the election, did attempt to prove otherwise, ascribing to his movement nonexistent merits and accusing the press of doing no more and no less than unleashing an informational war against the "Greens." However, even the small size of the ecological organizations—which lay as the basis of these shortcomings—actually only reflects another, much more serious tendency. Its essence lies in the fact that the chief antiecological center, that previously used to be located somewhere at the summit of the party-nomenklatura-departmental pyramid, has today shifted sharply downward, and the person who acts as the ecologists' chief opponent is no longer the state official, the director corps, or the "new Russian" businessman who is chasing profit at any cost, but actually that very same average-statistical Russian man in the street who, not too long ago, demanded the closing of practically all the dirty production entities and the establishment of strict ecological order.

According to Minprirody data that was cited in the summer of 1993, the precise following of the already enacted laws and statutes governing the protection of the environment would lead at that moment to the bankruptcy of more than 60 percent of the Russian enterprises. A year later, the economic crisis has definitely not loosened its embraces, and today the number of enterprises that guarantee their survival, including those doing so thanks to the ruthless exploitation of nature, is even greater. They can be made ecologically safe only by investing tremendous amounts of money in environmental-protection measures, which, either as a result of an increase in cost, will convert their output into something that is completely uncompetitive not only in the world market, but also in the domestic market, or will force the compensating of the environmental-protection costs at the expense of people's wages. Either of these situations will have an immediate negative effect on the population's standard of living. That is why the ecological slogans that previously seemed to be a reflection of man's legal right to have a normal environment, are evaluated today by the same population as green extremism.

Incidentally, one should not think that the problem of the price of ecology is pertinent only for Russia. A few years ago in Germany, a country that is ecologically favorable as compared with us, in response to a complaint concerning rabbits that were running across the lawns, the burgher who was giving me a ride only slapped the pocket in which his wallet was presumably located and, with a rather sour face, said that he would gladly trade all the rabbits for a new BMW. But whereas the West Europeans who have achieved a certain level of prosperity have to pay for the preservation of a normal living environment by rejecting a part of their welfare in the form of a second car or a country home, for Russians, 60 millions of whom live in areas with unfavorable ecological conditions, the alternative is much harsher. The smog that hangs over the city and the growing figures in the disease rate seem a much lesser evil than the much more tangible threat of unemployment, poverty, and fuel crisis.

As a result, the resolution of the most painful environmental-protection questions, with increasing frequency, comes up against not the inactivity of the executive authority, an economic depression, or imperfect legislation, but the population's elementary unwillingness to sacrifice anything at all for the sake of the ecology. There are more than enough examples of this: from the small Karelian settlement of Nadvoitsy, the residents of which, in exchange for their economic welfare, have reconciled themselves to ecological misfortunes, to the cities around the Caspian, where the local authorities took the money that had been allocated to combat flooding and diverted it to other purposes.

**'White' Movement To Focus on Health,  
Environment Issues**

94WN0241A Moscow TRUD in Russian 1 Apr 94 p 3

[Interview with Andrey Demin, by Svetlana Sukhaya:  
"Don't Be Afraid of Mirrors: Russians Must Know the  
Truth About the Nation's Health"]

[Text] Every day I hear and read about new programs that are aimed at improving the nation's health. Various foundations and associations are springing up like mushrooms. Meanwhile the situation with health of Russians is getting closer and closer to the concept of "catastrophe." A. Yablokov, chairman of the Interdepartmental Commission for Ecological Security, of the RF [Russian Federation] Security Council, provides an even more tragic formulation: "Ecocide in action." He stated recently, "I have ceased hoping that the government, caught up in the burning issues that face society today, will itself recognize the terrible danger of ecocide. Society as a whole must force the authorities to act!" That was the topic of our discussion with Andrey Demin, a consultant in the MVK [Interdepartmental Commission] apparatus.

Demin: So far, we do not have any broad public movement for health. The organizations that basically engage in these questions are rather narrow organizations of professionals, primarily medical doctors. But no one is coordinating their activities. The "Green"—ecological—movement is developmentally two to three years ahead of the "White" movement for health that is being born today. In analyzing what is occurring, we attempt not simply to confirm the tragedy, but also to seek an answer to the question, "What should we do?" I would answer that question in this way: the only path is to build health into the country's socioeconomic development. The crux of the matter is to assure that health actually becomes the chief priority for the state, and to assure that every decision is made with a consideration of its consequences for people's health.

Sukhaya: What are the first steps in the "White" movement?

Demin: It is necessary first of all to at least collect the information and to unite the organizations that already exist. One of our first projects is the preparation and publication of an atlas, entitled "Health and the Environment." It contains a scientifically substantiated picture of the state of health of the population of Russia over its entire territory. The task is to depart from the impersonal average figures and provide specific information. Because the first report on the health of Russians did not appear until late 1992. We are just beginning to make our way out of the fog. All the base figures and indicators used to be hidden and classified. For example, a document on the problems of alcoholism at Goskomstat [State Statistics Committee] was prepared for the leadership in only a few carefully numbered copies. It used to be felt that some "chief administrator," issuing commands from Moscow, could change the entire situation in the country.

Recently I was at a seminar in Canada. I kept hearing the term "a society that is moved by information." That is, a society not moved by somebody's will, not by fraud, not by slogans or an attractive idea, but by objective information. By having that information, people are capable of understanding and changing a lot. If, of course, they still have hope...

The information about health was too frightening, and too obviously pointed the finger of responsibility at the system, so it was "classified." But in recent years the authorities, who have begun everything "from a clean slate," have taken the risk of declassifying the situation. And thank God that the job has been brought to its end. The first report was a purely informational one. We were given the task of creating a mirror. The mirror appeared. Russians looked into it and they were terrified. But they learned the truth about themselves. Moreover, the President's Edict and the government's decree stating that similar reports are a mandatory annual procedure were enacted.

Sukhaya: Let's hope to God that, with every passing year, this mirror will frighten us less and less. But it is also important that that mirror should not be "curved."

Demin: The first experience has indicated that we can no longer deal only with average figures. There used to be indicators for the mortality rate and the birth rate for the entire Soviet Union. But with the tremendous difference between, say, Central Asia and the Baltic republics, they lost any real sense. They were all leveled off. It is impossible to change or resolve anything by orienting oneself on them.

In 1992 joint research was carried out in Karelia by local specialists and their neighbors from Finland. They studied the people who were living right next to one another—on identical land, under the same sky, amid the same forests and lakes. But how different the situation proved to be with our neighbors' health! For example, on the Russian side the overall mortality rate in the 33-64 year age group was almost twice as high, and the mortality rate from cardiovascular diseases was almost 67 percent higher.

We should have realized long ago that health is not simply something that is "God-given." It directly depends upon, for example, whether the city has a normal water-supply line.

Sukhaya: It would seem that "omnipotent" Moscow answered for the average figures. Does the specific data also presuppose actions taken locally?

Demin: Of course a lot can be done by people's own efforts, but some things require federal support. We plan to send out our atlas for all the territories, and to make the objective picture known to the local population.

Quite recently a group of specialists on the initiative of and under the leadership of A. Yablokov prepared a



report entitled "The Population's Health and the Chemical Pollution of the Environment in Russia." Once again, this was the first attempt, on the basis of a tremendous amount of factual material, to compile the proof of the pernicious influence that specific chemical factors have upon various indicators of people's well-being. By having that information, everyone is free to decide how to avoid the threat to life—his own, and that of his children and grandchildren: whether he should leave a dangerous area or, by uniting with other victims, to force the polluter (including by way of the court) to stop his poisonous emissions. The report was a compilation of hundreds of scientifically proven figures and facts. We shall quote only a few of them.

The industrial emissions from our enterprises are counted in the millions of tons. The annual amount of pollutants for every inhabitant of Russia is approximately 300 kilograms. The cities that head this sad list of leaders are Norilsk, Nickel, Novotroitsk, Angarsk, Monchegorsk, and Novokuybyshevsk. And, as compared with Moscow, Samara, or Arkhangelsk, the indicators are higher by tens of times!

In Moscow the highest level of pollution of the atmospheric air is typical of the center, the northwest, and the northeast. The level of the disease rate for bronchial asthma among children here is higher by a factor of three or more than in the city's relatively clean rayons.

In the children who have been subjected to the effect of the polluted air, health problems arise even before the moment of birth. For example, in Moscow the weight of newborn infants born to mothers living in the area influenced by the emissions from the Motor Vehicles Plant imeni Likhachev is an average of 400 grams less than in the cleaner control rayon.

The causes of childhood disability today include in first place affections of the central nervous system. The frequency of such diseases constitutes, on the average, 38 per 1000 children, but in ecologically serious rayons that figure jumps to 50 or more.

In Russia there is a constant increase in the number of pregnancy pathologies, primarily in the major industrial centers. In Ufa the indicator for various complications in pregnant women during the past 20 years increased from 8.9 to 20.1 per hundred births—this is almost three times more than the average republic level. The reason is that a tremendous number of women work in enterprises of the petrochemical complex. In Bratsk 40 percent of the women who have decided to have children have a premature cessation of pregnancy, and 51 percent have a pathology in childbirth. So just think about how many chances a future mother who lives here has for carrying and giving birth to a child without any complications.

The serious ecological situation increases the risk of having cancer. The highest indicators for lung cancer are recorded in the major industrial oblasts: Leningrad, Nizhniy Novgorod, Saratov, and Chelyabinsk oblasts. The cities that are especially dangerous are those where

aluminum plants that use obsolete technology are located (Krasnoturinsk, Kamensk-Uralskiy, Shelekhov, Bratsk). There is increased oncological mortality among the population of cities where enterprises for the smelting of copper and nickel are located (Rezh, Ufaley, and Karabash in Sverdlovsk Oblast, and Nickel in Murmansk Oblast). In Magnitogorsk in the atmospheric air the concentration of the very dangerous carcinogen benzopyrene exceeds the PDK [maximum permissible concentration] by as much as a factor of 90. There is increased danger to people's health in many cities with a well-developed chemical or petrochemical industry. For example, in "chemical" Sterlitamak the oncological disease rate is twice as high, the stillbirth rate is six to seven times higher; the frequency of congenital defects in development is three times higher; and the disease rate for bronchial asthma is six times higher.

It was not too long ago when information such as this probably would have been classified. Today we are attempting to publicize it as rapidly and as widely as possible. Not in order to frighten people, but in order to get them to take action.

**Sukhaya:** Do you believe in my favorite saying, "Forewarned is forearmed?"

**Demin:** Definitely, a person can wave a warning aside and fail to pay any attention to it. But he must have the right to receive this kind of information.

This is a bitter truth. But there is no need to be afraid of mirrors. As I have already said, by having information, people are capable of understanding and changing much in their lives, if, of course, they still have hope...

## BELARUS

### Official Views Consequences of Chernobyl Accident

AU2604144294 Frankfurt/Main FRANKFURTER  
RUNDSCHAU in German 26 Apr 94 p 12

[Interview with Nikolay Martinovich Morkovskiy, deputy chairman of the "state committee for the elimination of the consequences of the Chernobyl catastrophe in Belarus," by Dietmar Ostermann: "Therefore, This Must Never Be Forgotten"]

[Text] **Ostermann:** Eight years after the reactor accident at Chernobyl, many have done with the maximum credible accident or take it as a proof that the world also overcomes such catastrophes. Belarus was among those who suffered most from the consequences. Is all that already forgotten and over?

**Morkovskiy:** Twenty-two percent of our territory is still radioactively contaminated. One-fifth of the Belarusian population lives there. An area of the size of your Saarland cannot be used; 130,000 people were resettled. We had to build new apartments, outpatients' departments, schools, and whole cities. The program is being

continued. Belarus is spending 12 percent of its state budget on the elimination of the consequences of Chernobyl. And that after eight years!

I do not think that one can say that we have forgotten Chernobyl.

**Ostermann:** Nevertheless, many affected persons are complaining about a lack of support; 45,000 Belarusians are still living in highly contaminated areas.

**Morkovskiy:** Not all of them want to leave. In May 1986, one week after the catastrophe, I myself organized the first evacuations in the rural district of Narovlya. At that time, we were not properly briefed ourselves. And the people did not believe in the danger and wanted to stay. Then they nailed up their doors and windows with boards and said: We will come back in three weeks.

Out of the 320,000 inhabitants of the district, 12,000 still live there, although half of the district is still part of the "prohibited zone" with a radiation of more than 15 curie per square kilometer and everyone has the right to free resettlement. This also applies to the city of Narovlya itself, where 12,000 people lived before. Out of the 7,000 inhabitants who stayed there, only 1,000 applied for resettlement. The others wanted to stay.

**Ostermann:** Former helpers after the catastrophe and radiation victims are threatening a hunger strike, in order to draw attention to their disastrous situation, among them there are also Belarusians. Are all of them to blame themselves?

**Morkovskiy:** I have not heard anything of that. Perhaps you are right that the situation is deteriorating. I also belong to the categories of liquidators. The diseases from which I am suffering need not come from radiation. They may also be due to the nervous strain that was so great in all those years. One looks at oneself and asks oneself: How come? In a poor country there are many problems, also without Chernobyl.

**Ostermann:** Nor can you say that to a mother whose child has increased levels of radioactive iodine in its thyroid nor to a person suffering from cancer who has to wait for treatment for months.

**Morkovskiy:** Many things were planned, but the money is lacking. In 1989, the Soviet Parliament adopted a program for the elimination of the consequences. But the Soviet Union does not exist any longer. Today, the means that are available to us suffice just for a quarter of the planned measures. If we were to implement everything, we would have to spend half of our state budget. This would ruin us.

**Ostermann:** Does this mean that the other republics abandoned the program?

**Morkovskiy:** Ukraine refrains from helping us in any way, although an agreement provided for it. Last year, Russia supported us with 8.5 billion rubles. We bought medicine and medical equipment with the money.

**Ostermann:** Russia and Ukraine have again taken a fancy to nuclear power. Moscow is planning new nuclear reactors, Kiev does not switch off Chernobyl despite numerous incidents. What does Belarus think of it?

**Morkovskiy:** If some have the advantages and some the damage, one comes to different opinions. Two-thirds of the areas that were contaminated in the Soviet Union at that time are in Belarus. Chernobyl is in Ukraine and supplies the Ukrainians with electricity. Our parliament called for the shutdown of the power plant in a resolution. From our point of view, this is probably justified.

**Ostermann:** Kiev argues that it cannot afford to switch it off.

**Morkovskiy:** Perhaps it is better to be a little afraid than to die of cold and hunger. This cannot be definitely said, there are pros and cons. In Belarus the situation is clear: We do not have nuclear power plants. But we have the consequences of the Chernobyl catastrophe. And nuclear power plants are everywhere at our borders—in Smolensk, Chernobyl, near Rivne and Ignalina.

**Ostermann:** Western experts remembered Chernobyl punctually on the anniversary of the catastrophe and they are warning against a new catastrophe. Are you alarmed?

**Morkovskiy:** I think that there would not have been an explosion if rules had not been violated at that time. Irresponsibility and the violation of norms led to it. However, I am an agronomist, not a nuclear physicist. There should be projects that are completely safe. In this way, however, the danger to the people remains. Therefore, one must never forget what happened here.

## UKRAINE

### Kiev Water, Topsoil Indicate High Levels of Radioactivity

AU2804172794 Kiev HOLOS UKRAYINY in Ukrainian  
26 Apr 94 p 1

[Unattributed report: "Figures and Facts"]

[Text] As follows from the results of radiation tests, this year the concentration of tritium in the topsoil on the territory of Kiev is largely lower than admissible. However, in some places, it was tens of times the normal value and a hundred times the norm in subsurface waters. The sources of tritium contamination have not been determined....

At the same time, in the Chernobyl zone, over the last year, the content of strontium and cesium in almost all the water ducts has increased by a factor of between one and a half and two.

In the water of the reclaimed land on [the Dnieper's] left bank, it is four times the admissible concentration. Over the last year, the transfer of cesium with Prypyat River

water to the Kiev reservoir has increased approximately fivefold and of strontium—sevenfold. Even though the content of these radionuclides in the drinking water of the towns of Prypyat and Chernobyl is below the norm, it has also increased by a factor ranging between one and a half and seven....

Incidentally, last year, just one and a half percent of the Chernobyl fund was invested in the decontamination of the land; this fund accounts for 12 percent of the state budget.

### IAEA Declares Chernobyl Nuclear Power Station Unsafe

LD2104180694 Moscow Ostankino Television First Channel Network in Russian 1100 GMT 21 Apr 94

[Video report by correspondent Anton Vernitskiy; from the "Novosti" newscast]

[Text] Today, an international conference on the problems of the Chernobyl nuclear electric power station began in Vienna, which is being held under the aegis of the IAEA. Experts from that organization who made an inspection of that station in the Ukraine came to the conclusion that at the present time the state of the nuclear power station does not correspond to the generally accepted international standards.

[Vernitskiy] It was proposed that this conference should be held by IAEA General Director Hans Blix. At the beginning of April he visited the Chernobyl nuclear power station with a group of experts for the purpose of checking how safe it is. The conclusions of the experts were not comforting. According to Blix' statement, the safety norms at the station do not correspond to even the least stringent international standards. First and foremost, the state of the sarcophagus on the destroyed reactor of the fourth power unit gives cause for concern, as well as the shortage of modern equipment and spare parts. Besides this, the funds allocated for the elimination of the consequences of the radioactive contamination are constantly being reduced.

In their turn, the Ukrainian authorities think that the data given in the IAEA representatives' report are somewhat exaggerated, although according to Valentin (Kupnov), who is responsible for the safety of the Chernobyl zone, the best solution would be the mothballing of the Chernobyl nuclear power station. However, Ukraine cannot simply close down the nuclear power station. An extremely acute shortage of energy resources threatens the Ukrainian economy with complete paralysis.

It is most likely that at the conference in Vienna, Ukraine will be offered help in financing the development of the atomic industry in exchange for shutting down the Chernobyl atomic power station. [video shows interior and exterior of station]

### Green Party Effectiveness Hampered by Political, Ecological Split

94WN0249A Kiev VECHIRNIY KYIV in Ukrainian 17 Mar 94 p 2

[Interview with Anatoliy Panov, member of the Green Party of Ukraine, by Valentyn Smaha, commentator on ecology for VECHIRNIY KYIV: "The Bitter Truth Is Better Than a Sweet Lie"]

[Text]

Smaha: Anatoliy Mykhaylovych, we've known each other for a long time. The next round of the pre-election struggle is fast approaching, and everybody has suddenly started mentioning ecology. Are the candidates just making eyes at a fashionable topic? Or do you have a different interpretation of this matter?

Panov: No. That's the way it has been and always will be in all countries, not only in our young Ukrainian state. Populism, demagoguery—neither you nor I made up these words. The world, unfortunately, is unfinished and imperfect.

Smaha: That's true, Anatoliy Mykhaylovych, but do you recall how the Green Movement began in Ukraine? That first meeting near the Central Kiev Stadium on 13 November 1988, the First Congress of the Green World [Zeleniy svit] Association with the dazzling greetings by Oles Honchar, the first election—as it were—to a democratic parliament. That "rebuilt euphoria"—what was it that brought it all to an end so suddenly?

Panov: In my opinion, it was the profound crisis in the environmental-protection movement.

Smaha: But what caused this? Because for nearly seven years you were the deputy chairman and executive director of the Green World Association, and so—to a certain extent—you must have felt responsible for what happened in this country's environmental-protection movement....

Panov: That's true. Nor do I shirk my responsibility in this matter. But understand me correctly: From the very beginning our movement has included forces that can be characterized—so to speak—as centrifugal and centripetal. Some persons (a typical example would be Serhiy Konev from Dniprodzerzhynsk) who emphasized the political aspects of the cause. Others (and here I could cite Alla Shevchuk from Odessa) regarded the coordinating organ as something to provide help in solving small-scale, regional problems—things like saving the well-known Kulyanyk Estuary near Odessa. The "politicians" and the "practioners" persisted in taking very different stances in their attitude toward the environmental-protection movement. Enthusiasm really did exert a substantial influence on the fate of the Green World Association.

Smaha: Just what did happen? Was it something similar to the former Society for Environmental Protection?



**Panov:** No, come on now Valentyn Ivanovych! People were making careers, and the cause stood still. I don't want to publicly name those persons who made careers for themselves based on the phraseology of environmental protectionism. Nor do I wish to enumerate the "beetles" who became rich on Western aid or various kinds of speculative ventures. What I want to do here is to list the problems which Green World has done some organizational work on. The public can solve them or not, as it sees fit....

**Smaha:** What specific problems do you mean?

**Panov:** First, there should be a moratorium on building new units at nuclear-power stations, and the continuation of operations at the Chernobyl AES [Nuclear-Power Station] should be revoked. These continued operations threaten Ukraine with a catastrophe in the very near future. They will not bring the energy crisis to an end, but rather deepen the economic crisis. The whole trouble is that Ukraine lacks a machine-building and raw-material base for nuclear-power engineering. All the talk about the effectiveness of our nuclear-power stations is a bluff. We do not have such possibilities as Beria had for maintaining order in the atomic-power industry. Nor will we ever have them. It would mean that one out of every three citizens would have to be condemned for the absurd Article 58. What nonsense....

**Smaha:** Does that mean that the aggressive plans to use nuclear power for Ukraine's future electric-power engineering are based on nonsensical principles?

**Panov:** Of course! Chernobyl in its present-day guise is potentially hazardous. We "Greens" have officially demonstrated that Kiev lies within the zone which suffered from the accident at this AES. People from Narodnychi have been resettled. But there are districts in Kiev where the level of gamma-type radiation is higher. Why, then, are Kievans not being resettled? Because the Supreme Council has blocked this decision. The reason is a simple one: They don't have the money to do this.

**Smaha:** If they don't have the money, where did it all go?

**Panov:** We must speak honestly about the conditions under which Ukraine's capital is now living. The state cannot help—the world community must come to its assistance! But we seem to regard it as best—during these times so trying to our souls—to conceal our illness within. It's as if we fail to understand that future generations will have to pay for this.

**Smaha:** But could not all this likewise be understood as inflaming the passions?

**Panov:** Certainly. But why, then, are the people who are most competent in these matters leaving Ukraine. Mykhaylo Sorokin has become director of the Kursk AES, after having left the Chernobyl AES. The deputy general director of Ukratomenergonaglyad—Heorhiy Kopchynskiy—has quit working there. And the director of the Ukrytya facility—Mykola Sherbyna—has also left

his post. These people are professional experts in the nuclear-power field! They understand better than anyone what is going on. But we—either because of stupidity or willful negligence—continue to keep millions of people in ignorance.

**Smaha:** There's a great deal of talk nowadays about a new isotope—americium. Its appearance will compel us to rethink the entire strategy of eliminating the consequences of the Chernobyl accident. What's your attitude toward this?

**Panov:** I view it as a great deal of speculation on a fashionable topic. Carrying the weight of authority for me are the words of Academician Dmytro Grodzynskyy to the effect that americium will not be any safer than the hot sections in the core of Energy Unit No. 4 at the Chernobyl AES. And the presence of material from these sections has been ascertained even as far away as California.... Therefore, let me repeat the following: The declaration of Kiev as a place which suffered from the Chernobyl AES is a central question in the politics of eliminating the consequences of the accident there.

**Smaha:** Let me make sure that I've understood you correctly: You're saying that the bureaucrats who are shutting their eyes to the obvious truth are knowingly condemning our capital to die out gradually?

**Panov:** I would not use the word "knowingly." It is more through stupidity and ignorance. The central question is up to the strength and possibility of the state environmental-protection organ with strong support from the public. So far our Ministry of Environmental Protection has been producing ambassadors: in Israel and in Romania. Now Mykola Korobko is a functionary in Krivoy Rog. But when he was a deputy, he at least set to work and made an active initiative. The ministry, however, as soon as this project started to gather momentum, has cut it off at the roots by an administrative reduction of personnel. Just think: We are reducing a department which could enable us to survive! Nothing more absurd could be thought up. Everything is perishing in the debates on environmental protection. A typical example is Mykola Fedorynchuk, who is the present executive director of Green World. Words, words, words.... There are no people who do anything—that's the whole trouble.

**Smaha:** As I understand it, the key question is reforming the political system. Are you taking part in the election struggle?

**Panov:** Yes, I am. The collective of the Kiev Polytechnical Institute has put me up as a candidate for the office of deputy from the Radyanskyy Election District. I am participating in the election as a citizen, and I have a calm attitude toward my possible defeat.

But the "Greens" are people with intense feelings. The stormy disputes within the Association are turning some truly intelligent persons away from us. The Association is becoming impoverished of intellect and enriched with

careerism. This is hardly to the benefit of our cause. I left Green World because of its political intrigues. I consider that the main thing is to achieve effective work by the environmental organs.

Here's a simple example. An inspector closes down the Mariupol Sintering Plant as being too harmful to the health of the population there. But the minister opens it up again, citing its "importance" for the Ukrainian economy....

**Smaha:** And just how will things develop?

**Panew:** As of now, parallel structures are emerging within the environmental-protection movement. They have lost faith in things as they presently exist. I can cite as an

example the "Mama-86" organization—an association of young Kievan ecologists. Matters simply cannot go on as they are now.

I think that—with some help from VECHIRNIY KYIV—the Green World Association will achieve a new life. I am opposed to the political bent in its work, and—indeed—I am against politicking as such. Let's try to help the readers of this newspaper to analyze and understand such vitally important questions as the true safety of americium, the ecological time bomb under Kiev, the so-called polygon in Pyrogova, and defective production. Let's give some thought to how to regulate the chaotic building of dachas near Kiev and to accord our city the status of a sufferer from the accident at the Chernobyl AES. There are many other unsolved problems, the solutions to which—I anticipate—we will be seeking with the help of VECHIRNIY KYIV's readers.

## REGIONAL AFFAIRS

### Largest Solar Energy Project To Start in Amsterdam in 1995

BR2004141494 Amsterdam POLYTECHNISCH  
WEEKBLAD in Dutch 14 Jan 94 p 3

[Unattributed article: "Amsterdam To Have Europe's Largest Solar Energy Project"]

[Text] Amsterdam—By next year Amsterdam will have the largest public housing solar energy project in Europe. Commissioned by the Amsterdam Energy Company [EBA], 66 homes in the district of Nieuw-Sloten are to be provided with photovoltaic cell systems. Danish, Italian and Spanish partners are following the progress of this large-scale, European Community demonstration project with great interest.

The recent promise of financial support from the European Community and Novem (Netherlands Organization for Energy and the Environment) has helped the Amsterdam project a great deal along. "Certainly because it concerns the first, large-scale project in Europe in which solar energy is wholly included in home architecture," says project leader J. Cace, of the management department of the EBA. She points out the fact that there will be no orange roof tiles on the roofs, but only dark blue solar boards. The total surface of the photovoltaic cell systems is 2,500 square meters, and the capacity of the solar cells is 250 kW. The foundations for the project will be laid in September of this year; the completion of the solar houses is planned for May 1995.

#### Public Network

Another striking part of the project is the fact that the electricity which will be produced will not go directly to the occupants of the houses but to the public network. Via the medium and low voltage network the current will go back to the district. "This way even houses that do not themselves contain solar cells will profit from the clean solar energy," says Cace. Through the use of solar energy, the inhabitants are able to reduce the amount of pollution in the atmosphere by 135 tonnes of CO<sub>2</sub>, 300 kilograms of SO<sub>2</sub>, and 376 kilograms of NO<sub>x</sub>.

The solar cells are made by R&S Renewable Energy Systems in Helmond and BP Solar in Leatherhead (United Kingdom), each of which is responsible for half of the cost. In addition to the commissioner, EBA, Ecofys is also taking part in the project. The project has also drawn the attention of other EC countries, which have similar plans. Participants are the PV Applications Center in Newcastle, Sermasa from Madrid, Miljokontrollen of Copenhagen, and the Institute Cooperatieve per Innovazione in Genoa. Case again: "Finally, it is an important demonstration project for Europe because it will, for instance, provide more insight into increases in scale, and the economic advantages of full integration of solar cells in the construction and power supply by district."

## BELGIUM

### Dumping Site for Low Radioactive Waste To Be Selected

BR2904103594 Brussels RTBF-1 Television Network  
in French 1830 GMT 28 Apr 94

[Text] As far as the environment is concerned, Belgium presently has over 7,000 cubic meters of low radioactive waste. This waste is stored in safe locations in the Mol area [Mol is known for its nuclear plant]. However, 50 years from now, more locations will have to be found as it is expected that the quantity of such waste will grow to 150,000 cubic meters. The organization responsible for storing radioactive waste, the ONDRAF [National Office for Nuclear Waste], has set up a list with 100 zones spread over 50 communes where dumping sites for low radioactive waste could be located. The final decision will be made in 1997, but Greenpeace already has denounced the ONDRAF plan as "unreliable." Sabine Breulet reports:

[Breulet] Low radioactive waste originates from nuclear plants, research institutes, and hospitals. It is estimated that their half-life lasts approximately 30 years. The ONDRAF project is to build a concrete storage house on clay or schistous ground covering 30 hectares. The site should make it possible to store 100,000 cubic meters of processed waste. A total of 98 zones spread over Flanders and Wallonia meet the criteria required for this dumping site. Fifty communes are being considered for this site, but only one will be designated. The final choice should be made by 1997 and then be followed by the approval requests. Thus, the dumping site for this type of waste will not be built until the year 2000.

## DENMARK

### Denmark's Global Environment Assistance Outlined

94WN0250/ Copenhagen BERLINGSKE TIDENDE  
SONDAG in Danish 6 Mar 94 p 7

[Article by Steen Voigt: "Denmark's Global Scrub Brush"]

[Text] As part of the effort to follow up on the United Nations' global environment and development summit in Rio de Janeiro, the Folketing resolved on 18 December 1992 to increase global environmental and catastrophe aid. The goal is to use half a percent of gross national income (GNI) for the purpose in 2002—probably around 6 billion kroner. Half of this will go directly to environmental efforts.

Denmark has allocated more than 600 million kroner for global environmental aid in 1994 to meet its international commitments. The investment, which will be close to 3 billion kroner annually in 2002, is expected to set an example for other donor nations.

Denmark's global scrub brush will pick up speed in the years ahead.



And it will go to work in East and Central Europe, Southeast Asia, southern Africa, the Arctic region, and many other places around the world.

The government's recent approval of a long-term environmental strategy from the Environment Ministry and the Foreign Ministry makes it possible to move fairly quickly to follow up the statements from the environmental summit in Rio de Janeiro in 1992 and the meeting of European environment ministers in Lucerne last year with massive economic action.

The money will be taken primarily from the environmental and catastrophe aid fund that a Folketing majority decided to set up on 18 December 1992 to strengthen our efforts with respect to international environmental problems.

The environmental part of the fund involves 500 million kroner this year and will increase by 200 million kroner a year until 1998. The goal is to provide a total of 0.5 percent of national income by the year 2002, around 6 billion kroner, half of which will go to the environment.

In addition the Foreign Ministry will channel a nine-digit sum annually, 145 million kroner this year, primarily to UN organizations where the money, along with the contributions from other countries, will be used for environmental projects.

For the first few years the Foreign Ministry will also finance distinctly environmental projects in the poorest selected countries in Southeast Asia, Vietnam, Cambodia, and Laos, through its general development aid. But later on, in 1996, these countries will also come under the fund.

### Unique

This joint long-term strategy means that Denmark is the first donor nation in the world to put its international environmental aid in a fixed framework.

"The environmental and catastrophe fund is unique on the international level and I definitely think it will set an example for like-minded donors in the UN circle, i.e., countries like Norway, Sweden, the Netherlands, Canada, and the United States, and perhaps Germany as well," said Leo Larsen, assistant administrative director of the Environment Agency.

He is head of the department of the Environment Agency that takes care of environmental aid, which is currently in the process of being expanded. The department will have almost 30 employees.

The four individual parts of the environmental strategy designate the countries and their environmental problems that the Danes feel especially qualified to tackle. Also with reference to the sale of Danish environmental technology and know-how and thus more jobs and additional technological advances in this country.

### From Europe to Asia

More than half the money will be used close to home: in the three Baltic countries, Poland, and the heavily polluted and polluting Russian areas around Kaliningrad and St. Petersburg. In addition, the Czech Republic, Slovakia, and Hungary also have a high priority.

A somewhat smaller nine-digit sum will go to Thailand and Malaysia in Southeast Asia where, as mentioned above, the Foreign Ministry will initially support the neighboring countries through development aid.

The special developing countries department is also considering aid for countries in southern Africa, but so far no recipients have been designated.

"This is mainly because we were working so hard to formulate a program for Southeast Asia that there was no time for anything else. And plans for Africa will not be relevant this year. At most there will be some preliminary soundings," Larsen said.

The reason why the Environment Agency specifically chose the five developing countries in Southeast Asia is that it was seeking a single contiguous region and that emphasis was placed on going into a growth area.

Thailand and Malaysia are experiencing rapid economic development. It appears that Vietnam will follow suit within a fairly short time and the countries' purchasing power in the commercial environmental market obviously played a part in the selection.

"It is clear that environmental considerations are the most important for all this. But it is also obvious that we are drawing on the vast Danish knowledge in this context. Therefore the selection also reflected the fact that the Danish state and its business sector are telling these countries: 'This is what we can offer. What do you need?' Where these two things coincide, things happen. And I think this is quite legitimate," Larsen said.

He foresees that Danish businesses can participate in about half of the fund's environmental aid in the form of supplying environmental technology and knowledge. But an investment must be made, among other things, through product development.

"There are big perspectives for the Danish environmental industry in the countries of Southeast Asia. With all respect for our funding, the countries' own investments in combating pollution are enormous in relation to the small amount of aid they receive. I would guess that they receive less than 10 percent from outside sources, the rest they pay themselves," said Larsen.

Apropos money and industry, the world market for environmental technology is big and growing. In 1990 it amounted to a good 1.2 trillion kroner and will rise to an estimated 2 trillion kroner by the year 2000.

### To the Poorest

The environmental strategy designates four investment areas in Southeast Asia, namely cities, forests, coastal zones, and the protection of biological diversity, i.e., animals, plants, habitats, ecosystems, and genetic variation. At the same time an effort will be made to provide the aid to the poorest areas of the country and the poorest sections of the cities because there is a clear connection between their pollution, health, and poverty problems.

And just as in the eastern nations, conservation will be given its "natural" place because Denmark has a lot of experience with sustainable management and protection of nature preserves.

Environmental aid for the Arctic region also comes under the developing countries section, with the emphasis on Greenland. Especially monitoring and conducting research into ocean and air pollution, climatic changes, and the thinning of the ozone layer. But part of the aid will probably be used to help Russia monitor its long coastal stretches along the enormous ocean areas.

"It is necessary to give the Russians some kind of assistance in providing environmental data from their region for otherwise the picture we get of the total stress on the ocean will be incomplete. At present we have no clear impression of how much pollution, including radioactive pollution, they have there," Larsen said.

### Environmentally Correct

As mentioned above the Foreign Ministry is in charge of the fourth part of the joint strategy, namely multilateral aid.

Environment Ambassador Erik Fiil, who heads the ministry's environment secretariat, expects that the largest amount will be given to the so-called global environmental facility (GEF). This is controlled by the World Bank and the two UN organizations for the environment and development, the UN Environment Program (UNEP) and the UN Development Program (UNDP).

The ministry has just started a biogas project in Tanzania in cooperation with the GEF, which has been selected as the financial mechanism for the Rio summit's four main areas: climatic changes (with the climate convention that goes into effect on 21 March), biological diversity, ocean pollution, and the depletion of the ozone layer. Forest and desert projects may also be considered.

In addition, multilateral Danish environmental aid will continue to go directly to UNEP, UNDP, and a number of international environmental organizations, including private ones, for example the World Wildlife Fund and Nepenthes, the rain forest group.

Incidentally, the Foreign Ministry's environment secretariat was set up last September to follow up on the Rio summit's principle that environmental protection should form an integral part of development policy, among other things.

"Thus it is also our task to constantly remind our colleagues in DANIDA [Danish International Development Authority] that their development projects must also be environmentally correct, so that all our international aid will now hang together," said Erik Fiil.

### [Box, p 7]

- Air pollution: Combating local and multicountry air pollution in the East European nations and in the cities of Southeast Asia through support for increasing efficiency and purifying heat and energy production, promoting alternative energy sources, and improving mass transit.
- Ocean pollution: Support for treating waste water from industries and cities in East Europe, which will benefit the Baltic Sea. In Southeast Asian cities it will benefit the important ocean areas along the coast, which function among other things as a development area for young fish. Agricultural advice on fertilization to reduce the nutrient load in oceans, for example the Baltic Sea.
- Nuclear power plants: The goal is to continue to improve safety, especially at the Ignalina nuclear power plant in Lithuania and at Sosnovy Bor near St. Petersburg (both of the Chernobyl type) through aid for improving control systems, fire protection, and communications. The aim is to make the plants superfluous through aiding other energy sources.
- Ozone layer/greenhouse effect: Aid to Greenland under the Arctic program for compliance with international conventions. Aid for reducing CO<sub>2</sub> emissions and the use of substances that destroy the ozone layer in East European countries, for example, through improving energy efficiency, making traffic more environmentally friendly and phasing out the harmful substances.
- Hazardous waste: Aid for limiting and eliminating hazardous waste from industries in the East European countries and in Southeast Asia, for improving local household waste systems, and for the environmentally correct location and establishment of incinerators and recycling plants.
- Environmental technology: Environmental efforts include the transfer of (Danish) environmental technology to recipient countries—which will also benefit employment and the further development of environmental knowledge and technology in Denmark. Danish firms, authorities, and institutes have a great deal of knowledge in the key areas of handling waste, water treatment plants, protecting ground water, cleaning smoke, and combating ocean pollution.
- Conservation: Aid for preserving the large untouched natural areas that still exist in East Europe—in spite of everything—along with their animal and plant life by expanding preserves and restoring and including consideration for nature in agricultural and forestry methods. In Southeast Asia aid for regenerating forests and preserving biological diversity, among other things. Aid to safeguard the delicate ecological balance in the Arctic.

- Environmental training: Support for developing environmental and conservation regulations, the training and education of personnel, and building up both central and local environmental and nature

authorities. Providing advice on regulation in the environmental area via both rules and taxes. Support for improved supervision of the environment and nature.

Environmental Aid (in millions of kroner)

	1994	1995	1996	1997	2002
Environmental aid to East Europe (including sector programs)	300	400	500	600	
Environmental aid to developing countries (including Greenland/the Arctic)	200	300	400	500	
International environmental aid (UN, GEF, etc.)	145	135*	135*	135*	
Total	645	835	1,035	1,235	around 3,000**

\* Minimum amount

\*\* 0.25 percent of GNI

## GERMANY

### Greens Want Nuclear Energy To Be Abandoned Within 2 Years

AU2604110394 Hamburg DPA in German  
0847 GMT 26 Apr 94

[Text] Bonn (DPA)—In possible coalition negotiations with the Social Democratic Party of Germany (SPD) after the Bundestag election, the Alliance 90/Greens will insist on the abandonment of nuclear energy, possibly within two years. It will not be easy to push this through, but it is economically and technically possible, Ludger Volmer, spokesman of the Federal Executive Committee, said before journalists in Bonn on Tuesday on the occasion of the eighth anniversary of the nuclear catastrophe at Chernobyl. One can build on the 1986 SPD decision to abandon nuclear power within 10 years.

Volmer and his party friends Klaus-Dieter Feige and Manfred Busch affirmed the call for the immediate shutdown of all Chernobyl-type reactors, which are the most dangerous timebombs in Eastern Europe. Retrofitting measures that cost billions [currency not specified] would not reduce the risk of a new catastrophe. New energy policy priorities have to be set. The abandonment of nuclear energy in Germany can break existing barriers and initiate an energy policy throughout Europe that is oriented toward ecological restraint, it was stated.

## ITALY

### Huge Illegal Toxic Waste Dump Discovered in Northwest

LD2104131594 Rome RAI Uno Television Network  
in Italian 1130 GMT 21 Apr 94

[Text] In the province of Savona, 11,000 drums containing dangerous toxic waste have been discovered in the town of Borghetto Santo Spirito. Alfredo Livi reports:

[Livi] These drums, which have been crammed into this immense concrete cistern, contain 13,000 tonnes of hazardous waste. They were buried in this pit in Borghetto

Santo Spirito, which is on the Ligurian Riviera in the province of Savona. This is the largest find of this type in northern Italy, perhaps in the whole of Italy. The hazardous material, contained in 11,000 drums which have been reduced to scrap, was leaking into the water table.

At this immense illegal tip, the men behind this trade in hazardous waste accepted material which certain industries wanted to get rid of in a hurry. Acting on the complaint made by a brave mayor, a team of judges from Savona uncovered the trade and the illegal tip. However, technicians from Castalia, the state-controlled environmental company which is cleaning up the site, have discovered that the situation is far worse than at first thought.

It will cost the local authorities 10 billion lire to clean up this ecological timebomb. It is estimated that the men behind the illegal trade made 50 or 60 billion lire.

The dump discovered in Borghetto Santo Spirito is just the tip of the iceberg.

## NORWAY

### Daily Considers Possibility of U.S. Shift on Whaling

PM2704115094 Oslo AFTENPOSTEN in Norwegian  
26 Apr 94 p 18

[Editorial: "Whaling"]

[Text] In the run-up to the annual meeting of the International Whaling Commission (IWC) in less than a month's time the war of nerves has begun again. While the British Sunday newspaper, THE OBSERVER, reports that leading countries in the IWC—led by the United States and Great Britain—have ready a draft agreement which means that the way is being paved for a reintroduction of whaling quotas, it is reported from Washington that there is nothing to indicate that the U.S. Government has changed course on the whaling issue.

In the United States and several of the EU [European Union] countries public opinion has some very strong feelings against whaling, and it is probably less than likely



that it will prove possible in the short term to reach agreement in the IWC on a resumption of commercial whaling. It looks, however, as if the United States is on its way toward accepting the principle of the scientifically based management of whale stocks. Even though there will still be some way to go before it is possible to achieve agreement on whaling quotas, a change in the U.S. stance represents an admission that there is a scientific foundation for exploiting whale stocks in some waters. This can quite rightly be interpreted as a decisive breakthrough for the arguments on which Norway has stood firm since the government gave the green light for 300 minke whales to be caught.

It is important for the future of the commission that such agreement on scientifically based resource management is achieved. If the whaling nations and the other countries in the IWC remain divided in the views they take on this point, there is a great likelihood that the IWC will split. Nations that have produced documentary evidence that there is a scientific base for whaling could resign from the organization—and this would mean that the IWC would be turned into a purely conservationist organization.

## UNITED KINGDOM

### First Marine Conservation Officer Assigned

94WN0258A London *THE DAILY TELEGRAPH*  
in English 14 Mar 94 p 10

[Article by Paul Stokes: "First Marine Protector for Coastline Under Threat"]

[Text] A Scotsman has been recruited as Britain's first marine conservation officer, responsible for protecting the threatened coastline of Wales.

Simon Reddy, 27, an ecologist, will work to save threatened birds, fish and animals along one of Britain's wildest and most beautiful shorelines.

Environmentalists say the quantity and range of sea life in the region makes it one of the most important marine habitats in Europe.

Mr Reddy's area of responsibility includes the whole of Cardigan Bay, home to a family of about 100 bottle-nosed dolphins and one of only two permanent locations the sea mammal populates in the Europe's northern waters.

Killer whales can frequently be seen basking in the bay on their way to and from their breeding grounds.

Naturalists also have evidence that larger whales are arriving in the area, with one confirmed sighting of a fin whale which can grow to 80 ft long and weigh up to 80 tons.

Other breeds of dolphin and porpoise also use the bay as well as the occasional pilot whale and basking shark. Seals are a common sight around the rocky shores of the mainland and islands where the bird life includes puffins, gannets, guillemots and razor-bills.

The sheltered nature of the Cardigan and Carmarthen bays means wildlife is threatened by pollution. Only three beaches along the whole of the Welsh coast—at Cefn Sidan, near Llanelli, Whitesands, at St Davids, and the North Beach in Tenby, Dyfed—carry European "blue flag" status for cleanliness.

The environment is also under threat from noise pollution from jet skis and boats.

According to the Dyfed Wildlife Trust many of the wild dolphins they have photographed have scars caused by the propellers of speeding boats they try to race.

Mr Reddy, who was educated at Aberdeen University and has worked for Greenpeace on its campaign ship, Solo, said: "It is a wonderful stretch of coastline but it is obviously in need of our help to address the various problems it now faces."

His work is aimed at helping the long-term objective of having the coastal waters designated a Marine Protected Area.

His appointment and associated work is initially funded for two years through £50,000 raised by the Dyfed Wildlife Trust and the same amount of EC grant money. It is hoped the post will become permanent.

### Minister Unveils Nuclear Accident Alert System

LD2604113694 London *PRESS ASSOCIATION*  
in English 1055 GMT 26 Apr 94

[By Amanda Brown, Health Correspondent, PA News]

[Text] An early warning system aimed at identifying a nuclear accident abroad was unveiled today - the eighth anniversary of the Chernobyl disaster.

Rimnet, the Radioactive Incident Monitoring Network, can identify raised levels of nuclear fall-out, enabling UK-based emergency services to spring into action.

Environment Minister Robert Atkins told a London news conference: "Any significant increase in radiation levels detected by the monitors will raise an alert on the Rimnet system and trigger alarms in continuously manned offices at my department."

"If Rimnet had been operating at the time of the Chernobyl accident, it would have indicated clearly where levels of radioactivity in the UK rose above normal background variations."

The system, which has monitoring stations across the country, can track radiation clouds by using sophisticated data and mapping equipment, while Government departments could alert water companies, local authorities and firms in the event of an accident.

The system will record measurements of radioactivity levels in air, water, food and people and store them on a database.

### **Debt-for-Nature Scheme Adopted in APEC Minister Meeting**

*BK2504060094 Manila BUSINESS WORLD in English 1994 p 10*

[Text] Debt-for-nature swap schemes may become the in thing for member-countries of the Asia-Pacific Economic Cooperation (APEC) as APEC environment ministers okayed a proposal which open APEC countries to innovative approaches in mobilizing financial resources for the environment.

An official from the Department of Environment and Natural Resources (DENR) said the proposal is aimed at awakening the interest of APEC member-countries to debt-for-nature swap arrangement.

At present, only Mexico and the Philippines are taking part in the program among APEC member-countries.

Robert Jara, project coordinator of DENR foreign assisted special project director, told BUSINESS WORLD the debt-for-nature swap scheme remains one of the more creative financing mechanism a Third World country can avail of in preserving its environment.

He disclosed that during the recently concluded meeting of APEC's environment ministers in Vancouver, Canada, the proposal was adopted as one of the "framework of principles" approved by the APEC body.

The principle specifically states that APEC member-economies should cooperate in exploring "innovative approaches to fund-raising scheme and mechanisms" in protecting the environment.

The debt-for-nature swap program, however recently came under attack from various sectors claiming the arrangement had become virtually impractical because of the rising cost of the Philippine debt papers.

The debt-for-nature swap arrangement is based on the principle that part of the foreign debt of severely indebted country is "canceled" by rechanneling it to a national currency fund directed to finance environment programs.

Specifically, the program involves the purchase and subsequent cancellation of part of a country's foreign

debt in exchange for the funding of local conservation efforts and a government commitment to protect the environment.

Mr. Jara claimed the arrangement even has finance Secretary Roberto F. de Ocampo's endorsement.

In a brief presented during the meeting of APEC's finance ministers last March, Mr. de Ocampo proposed debt-for-nature swap deals as one of the concerns which countries should adopt.

Based on the copy of the brief obtained by BUSINESS WORLD, Mr. de Ocampo praised debt-for-nature swap arrangement as a "win-win" scheme which can allow the Philippines to address both its debt and environment protection problems, specifically in relation to fund lack.

Mr. Jara admitted, however, that the program will not solve the country's debt problem as the amount of money involved is just too small to make a dent in the country's total foreign debt. On the other hand, he said it can help a long way in the country's conservation efforts.

The country's debt-for-nature swap program is currently supporting biodiversity projects in the El Nido Marine Reservation and St. Paul River Subterranean National Park, both in Palawan, and in Mt. Pulog in Northern Luzon.

The Foundation for Philippine Environment is overseeing the program in coordination with the Philippine Business for Social Progress.

Earlier, Environment Secretary Angel C. Alcala, who represented the country during the APEC environment ministerial meeting, explained the discussions mainly focused on integrating environment issues with the economy or industrialization.

It is an initial discussion on potential cooperation among APEC member economies in the area of environment and sustainable growth, he added.

The meeting was held last 23-25 March and was attended by 150 delegates, representing APEC's 18 member-countries.

APEC was formed in 1989 in response to increasing calls for closer economic cooperation among countries in the Asia-Pacific through increased intra-regional trade and investment flows.

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